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S L25/BI
SEARCH OF L25 IS APPROXIMATELY 72% COMPLETE
   1 FILES SEARCHED...
L26      16120 L25/BI

=> s l26 (l) (pine (3a) oil#)
L27          8 L26 (L) (PINE (3A) OIL#)

=> dup rem l27
PROCESSING COMPLETED FOR L27
L28          7 DUP REM L27 (1 DUPLICATE REMOVED)

=> s l26 (l) essential oil#
L29         27 L26 (L) ESSENTIAL OIL#

=> dup rem l29
PROCESSING COMPLETED FOR L29
L30         26 DUP REM L29 (1 DUPLICATE REMOVED)

=> s l26 (l) terpen?
L31         27 L26 (L) TERPEN?

=> dup rem l31
PROCESSING COMPLETED FOR L31
L32         27 DUP REM L31 (0 DUPLICATES REMOVED)

=> s l32 not (l27 or l29)
L33         23 L32 NOT (L27 OR L29)
```

Reviewed again 1/04

This is a good WPIDS caba CROPB/U Search for words/terms

L28 – Specific Copper compounds incls + pine oil

L30 " + ess. oil

L33 " + Terpene

=> d l28 1-7 bib ab kwic; d l30 1-26 bib ab kwic; d l33 1-23 bib ab kwic

L28 ANSWER 1 OF 7 WPIDS (C) 2002 THOMSON DERWENT
AN 2000-365012 [31] WPIDS
DNC C2000-110123
TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous suspension containing copper compound and a terpene derivative to improve activity.
DC A97 C07
IN BARSACQ, M; DUFAU, G; MOLLA, G
PA (ACTI-N) ACTION PIN SA; (ACTI-N) ACTION PIN
CYC 89
PI WO 2000024259 A1 20000504 (200031)* FR 25p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
FR 2784860 A1 20000428 (200031)
AU 9953770 A 20000515 (200039)
EP 1124424 A1 20010822 (200149) FR
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2000024259 A1 WO 1999-FR2036 19990824; FR 2784860 A1 FR 1998-13381 19981026; AU 9953770 A AU 1999-53770 19990824; EP 1124424 A1 EP 1999-939497 19990824, WO 1999-FR2036 19990824
FDT AU 9953770 A Based on WO 200024259; EP 1124424 A1 Based on WO 200024259
PRAI FR 1998-13381 19981026
AB WO 200024259 A UPAB: 20000630
NOVELTY - A plant protectant, fungicidal, bactericidal or bacteriostatic composition (A) comprises a suspension of at least one copper compound (I) in an aqueous emulsion of at least one terpene derivative (II). (I) is an oxide, hydroxide or mineral acid salt of copper.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(i) the preparation of (A);

(ii) the use of (II) for improving the effect of (I) in plant protectant (specifically fungicidal, bactericidal or bacteriostatic) compositions; and

(iii) a method for treating plants using (A).

ACTIVITY - Antifungicidal; antibacterial; synergist.

MECHANISM OF ACTION - None given.

USE - For protecting plants against fungal infections (e.g. vine mildew, Plasmopara viticola) and bacterial infections (e.g. bacterial wilt of peach and apricot trees and Pseudomonas bacteriosis of apple and pear trees).

ADVANTAGE - (II) potentiates the antimicrobial activity of (I), so that (I) can be used at lower dosages to reduce harmful or phytotoxic effects in the treated plants. In tests in vines artificially infected with Plasmopara viticola, treatment with copper at 2050 g/ha (as the hydroxide) plus pine oil at 650 g/ha reduced the level of damaged leaves to 22.50 %, compared with 36.25 % for treatment with 2030 g/ha of copper alone.

Dwg.0/0
TECH UPTX: 20000630
TECHNOLOGY FOCUS - AGRICULTURE - Preferred Components: (I) is **copper oxychloride, copper carbonate**, **cuprous oxide** or preferably **copper hydroxide**. (II) consists of monoterpene(s), preferably terpene hydrocarbons (or their oxidized derivatives), alcohols, aldehydes and/or ketones, especially a mixture of terpene hydrocarbons and alcohols. (II) is particularly in the form of an essential **oil**, specifically **pine oil** (preferably containing 90 % terpene alcohols).

Preferred Composition: (A) contains (I) at 200-600 g/l (specifically in the form of particles of. . .

L28 ANSWER 2 OF 7 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 2000-87768 CROPU F G
TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous suspension containing copper compound and a terpene derivative to improve activity.
IN Dufau G; Barsacq M; Molla G
PA Action-Pin
LO Dax, Fr.
PI WO 2000024259 A1 20000504
AI FR 1998-13381 19981026
WO 1999-FR2036 19990824
DT Patent
LA French
OS WPI: 2000-365012
FA AB; LA; CT
AB A plant protectant, fungicidal, bactericidal or bacteriostatic composition, comprising a suspension of at least one copper compound (I), e.g. an oxide, hydroxide or mineral acid salt of copper, in an aqueous emulsion of at least one terpene derivative (II), is claimed. Five formulations are presented, containing 36.76-43.55% **copper-hydroxide**, formulated with e.g. **pine-oil** (90% terpenic alcohols), arylphenoxypeg-phosphate triethanolamine, sodium salt of a sulfonated cresol-formaldehyde condensate, ethylene-glycol, glycerol, xanthan-gum heteropolysaccharide, urea, Tensiofix-BCZ (alcohol sulfate), Tensiofix-LX (lignosulfonate), Tensiofix-D40 (cationic/non-ionic surfactant), silicone antifoamer and Baragel-24, made up with water. In antifungal bioassays, the new formulations gave better control of Plasmopara viticola on young vines than standard WP and SC formulations.
AB. . . copper, in an aqueous emulsion of at least one terpene derivative (II), is claimed. Five formulations are presented, containing 36.76-43.55% **copper-hydroxide**, formulated with e.g. **pine-oil** (90% terpenic alcohols), arylphenoxypeg-phosphate triethanolamine, sodium salt of a sulfonated cresol-formaldehyde condensate, ethylene-glycol, glycerol, xanthan-gum heteropolysaccharide, urea, Tensiofix-BCZ (alcohol sulfate),. . .
ABEX. . . plants. In tests in vines artificially infected with P. viticola, treatment with copper at 2050 g/ha (as the hydroxide) plus **pine oil** at 650 g/ha reduced the level of damaged leaves to 22.50%, compared with 36.25% for treatment with 2030 g/ha of. . .
CT. . . UREA *FT; TENSIOFIX-BCZ *FT; TENSIOFIX-LX *FT; LIGNOSULFONATE *FT; SYNERGISM *FT; DECREASE *FT; LEAF *FT; DAMAGE *FT; FORMULATION *FT; PLANT-PART *FT; **COPPER-HYDROXIDE *TR; COPPER-HYDROXIDE *IN**; CU-HYDROX *RN; FUNGICIDES *FT; TR *FT; IN *FT; **PINE-OIL *TR; PINE-OIL *IN; PINE-OIL *RN;** INSECT-REPELLENTS *FT

L28 ANSWER 3 OF 7 WPIDS (C) 2002 THOMSON DERWENT
AN 1994-270912 [33] WPIDS
DNN N1994-213137 DNC C1994-124079
TI Electrically conducting paste for coating ceramic capacitors - contg. palladium, manganese, copper and aluminium in binder of ethyl cellulose, pine oil and turpentine.
DC A85 L03 V01 X12
IN ALEKSANDROVICH, T F; EZHOVSKII, I K
PA (VITE-R) VITEB MONOLIT PRODN ASSOC
CYC 1
PI RU 2007765 C1 19940215 (199433)* 4p
ADT RU 2007765 C1 SU 1992-5035179 19920331
PRAI SU 1992-5035179 19920331

AB RU 2007765 C UPAB: 19941010
The compsn. contains a metallic filler of palladium powder in a mixt. of manganese carbonate, ethylcellulose and **pine oil** in the ratio 54-65 : 1-5 : 0.76-1.9 : 94.-30%, with addn. of turpentine, oleic acid, **copper oxide** and aluminium oxide in amt. of 9-19 : 0.3-1.5 : 0.25-1.1 : 0.3-1.5%.
USE - The paste is used for metallisation of the faces of unfired ceramic blanks for monolithic capacitors.
ADVANTAGE - The compsn. has improved properties, with dielectric loss 120x10power-4, strength 190-225 kg./cm.2, coating continuity 98-100%, and thickness variation plus or minus 1.5 mkm., compared to previous values of 139x10power-4, 160, 93-95 and plus or minus 3.5 respectively.
Dwg.0/0
AB . . . UPAB: 19941010
The compsn. contains a metallic filler of palladium powder in a mixt. of manganese carbonate, ethylcellulose and **pine oil** in the ratio 54-65 : 1-5 : 0.76-1.9 : 94.-30%, with addn. of turpentine, oleic acid, **copper oxide** and aluminium oxide in amt. of 9-19 : 0.3-1.5 : 0.25-1.1 : 0.3-1.5%.
USE - The paste is used. . .

L28 ANSWER 4 OF 7 WPIDS (C) 2002 THOMSON DERWENT
AN 1994-254413 [31] WPIDS
DNN N1994-201431 DNC C1994-116927
TI Electrically conducting paste for metallising unfired bismuth contg. ceramic - contains alloy powder, ethylcellulose, **pine oil**, turpentine, oleic acid, tin di oxide, **copper oxide** and alumina, and is used in capacitor mfr..
DC A85 L03 M22 V01 X12
IN ALEKSANDROVICH, E F; EZHOVSKII, I K
PA (VITE-R) VITEB MONOLIT PRODN ASSOC
CYC 1
PI RU 2006077 C1 19940115 (199431)* 5p
ADT RU 2006077 C1 SU 1992-5046499 19920609
PRAI SU 1992-5046499 19920609
AB RU 2006077 C UPAB: 19940928
The paste contains (by wt.) powdered 52.0-65.0% Pt/Pd alloy , 0.8-2.0% ethylcellulose, 9.3-32.0% pine oil , 9.0-24.0% turpentine , 0.3-1.5% oleic acid , 0.1-10% SnO2, 0.2-1.1% CuO and 0.3-1.4% Al203.
USE - Used in the mfr. of capacitors.
ADVANTAGE - The applied coating strength w.r.t. the ceramic is improved, as is the contact bond, due to the enhanced uniformity and thickness range of electrodes applied by the contact method. Bul. 1/15.1.94
(Reissued from week 9431 to add EPI classifications/ Printed in week 9432)
Dwg.0/0
TI Electrically conducting paste for metallising unfired bismuth contg. ceramic - contains alloy powder, ethylcellulose, **pine oil**, turpentine, oleic acid, tin di oxide, **copper oxide** and alumina, and is used in capacitor mfr..
TT TT: ELECTRIC CONDUCTING PASTE METALLISE UNFIRED BISMUTH CONTAIN CERAMIC CONTAIN ALLOY POWDER ETHYLCELLULOSE **PINE OIL** TURPENTINE OLEIC ACID TIN DI OXIDE **COPPER OXIDE** ALUMINA CAPACITOR MANUFACTURE.

L28 ANSWER 5 OF 7 WPIDS (C) 2002 THOMSON DERWENT
AN 1994-339924 [42] WPIDS
DNC C1994-154997
TI New current conducting paste esp. for bismuth ceramic metallisation - uses sinter of strontium titanate, copper oxide, platinum-palladium alloy and organic binder contg. rosin, turpentine and oleic acid..
DC A81 L03 M13

IN EZHOVSKII, I K; ZYUZIKOVA, G M
PA (VITE-R) VITEB MONOLIT PRODN ASSOC
CYC 1
PI SU 1820947 A3 19930607 (199442)* 4p
ADT SU 1820947 A3 SU 1991-5014118 19911216
PRAI SU 1991-5014118 19911216
AB SU 1820947 A UPAB: 19941212
New current conducting paste mainly for the metallisation of unfired bismuth contg. capacitor ceramics in polyvinyl butyryl binding, additionally contains a sinter of strontium titanate, **copper oxide** and organic binder which additionally contains rosin, turpentine and oleic acid. The component wt.% compsn. of the paste is powered alloy of Pt-Pd 45-61, manganese dioxide 0.1-1, strontium titanate sinter 1.7-6, **copper oxide** 0.1-3 with the rest being organic binder of wt.% compsn. - ethyl cellulose 3.5-8, ethyl cellulose 8-17.5, white spirit 13-35, crude turpentine (**pine oil**), rosin, turpentine, oleic acid.

USE - For metallisation of unfired bismuth contg. ceramics on polyvinylbutyryl binder used in capacitor construction during the prodn. of electrodes of multilayered capacitors.

ADVANTAGE - Reduces cost and improves the operating characteristics of the prod. and printing properties of the paste by reducing the thickness of the electrode and the requirement for precious metals, improving electrode conductivity, the stability of the change of capacitance and dielectric loss after the action of high voltage and removal of deformations in the ceramic films.

AB . . .
for the metallisation of unfired bismuth contg. capacitor ceramics in polyvinyl butyryl binding, additionally contains a sinter of strontium titanate, **copper oxide** and organic binder which additionally contains rosin, turpentine and oleic acid. The component wt.% compsn. of the paste is powered alloy of Pt-Pd 45-61, manganese dioxide 0.1-1, strontium titanate sinter 1.7-6, **copper oxide** 0.1-3 with the rest being organic binder of wt.% compsn. - ethyl cellulose 3.5-8, ethyl cellulose 8-17.5, white spirit 13-35, crude turpentine (**pine oil**), rosin, turpentine, oleic acid.

USE - For metallisation of unfired bismuth contg. ceramics on polyvinylbutyryl binder used in capacitor. . .

L28 ANSWER 6 OF 7 CABA COPYRIGHT 2002 CABI DUPLICATE 1
AN 91:123365 CABA
DN 912312720
TI How disinfectants compare in preventing transmission of fireblight
AU Teviotdale, B. L.; Wiley, M. F.; Harper, D. H.
CS Kearney Agricultural Center, CA, USA.
SO California Agriculture, (1991) Vol. 45, No. 4, pp. 21-23.
ISSN: 0008-0845
DT Journal
LA English
AB Clorox (sodium hypochlorite), Lysol and **Pine**-Sol (**pine oil**) were superior to rubbing alcohol, Liser Listerine, hydrogen peroxide, Agrimycin 17 or **Kocide 101** in preventing transmission of Erwinia amylovora on cutting tools during the pruning of apple and pear trees. Spraying or soaking was more effective than dipping for surface-sterilizing the tools.
AB Clorox (sodium hypochlorite), Lysol and **Pine**-Sol (**pine oil**) were superior to rubbing alcohol, Liser Listerine, hydrogen peroxide, Agrimycin 17 or **Kocide 101** in preventing transmission of Erwinia amylovora on cutting tools during the pruning of apple and pear trees. Spraying or soaking. . .

L28 ANSWER 7 OF 7 WPIDS (C) 2002 THOMSON DERWENT
AN 1978-08399A [05] WPIDS

TI Copper printed onto ceramic substrate - bonded by heating to form copper-copper oxide eutectic which wets ceramic.
DC L02 M13
PA (GENE) GENERAL ELECTRIC CO
CYC 7
PI BE 859142 A 19780116 (197805)*
DE 2746894 A 19780427 (197818)
NL 7711619 A 19780425 (197819)
SE 7711796 A 19780516 (197822)
FR 2368450 A 19780623 (197829)
JP 53077212 A 19780708 (197832)
IT 1087260 B 19850604 (198624)
PRAI US 1976-734618 19761021
AB BE 859142 A UPAB: 19930901
Ceramic prods. are metallised by the selective deposition of metal powder on a ceramic substrate, then exposing the metal to a binder (1) and heat to obtain a eutectic melt of metal and binder, where most of the metal remains solid but is wetted by the melt which also wets the substrate, forming a direct bond between metal and substrate on cooling.

The powder is pref. size 1 um mixed with an organic binder (2) and solvent, esp. a methacrylate resin and **pine oil**, which are eliminated by heating after using serigraphy to apply the mist. The substrate is pref. BeO or Al2O3 printed with a mixt. contg. Cu powder to obtain a layer 0.025-0.05 mm thick, which is heated to 1065-1083 degrees C. in oxygen which is binder (1) and forms a eutectic with the Cu. alternatively, **copper oxide** can be mixed with Cu powder, which is pref. tough pitch electrolytic Cu.

A layer of **copper oxide** may be applied to the Cu film, esp. by heating in air. The final film of Cu only contains a small amt. of oxide (1).

Avoids all the difficulties involved with the conventional processes used to metallise ceramic.

AB . . .
The powder is pref. size 1 um mixed with an organic binder (2) and solvent, esp. a methacrylate resin and **pine oil**, which are eliminated by heating after using serigraphy to apply the mist. The substrate is pref. BeO or Al2O3 printed. . . is heated to 1065-1083 degrees C. in oxygen which is binder (1) and forms a eutectic with the Cu. alternatively, **copper oxide** can be mixed with Cu powder, which is pref. tough pitch electrolytic Cu.

A layer of **copper oxide** may be applied to the Cu film, esp. by heating in air. The final film of Cu only contains a. . .

L30 ANSWER 1 OF 26 WPIDS (C) 2002 THOMSON DERWENT
AN 2002-034569 [04] WPIDS
DNC C2002-009734
TI Aqueous antimicrobial composition for disinfecting, sanitizing/cleaning surfaces, such as leather, wood, plastics, metals, fabrics and skin, comprises preset amount of essential oil mixture, solvent and water.
DC D22 D23 D25
IN DEATH, J; DEATH, S S
PA (SCEN-N) SCENTSIBLE LIFE PROD; (DEAT-I) DEATH J; (DEAT-I) DEATH S S; (LAID-N) LAID BACK DESIGNS LTD
CYC 91
PI WO 2001084936 A1 20011115 (200204)* EN 19p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL

TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000049078 A 20011120 (200219)
US 6346281 B1 20020212 (200219)
US 2002068101 A1 20020606 (200241)
ADT WO 2001084936 A1 WO 2000-CA647 20000531; AU 2000049078 A AU 2000-49078 20000531; US 6346281 B1 US 2000-564282 20000505; US 2002068101 A1 Div ex US 2000-564282 20000505, US 2001-986892 20011113
FDT AU 2000049078 A Based on WO 200184936
PRAI US 2000-564282 20000505; US 2001-986892 20011113
AB WO 200184936 A UPAB: 20020117
NOVELTY - An aqueous antimicrobial composition for disinfecting, sanitizing or cleaning surfaces, comprises (in volume%) a mixture of antimicrobial essential oils (0.5-10) in water, a solvent (2-12) and water (to make up 100). The essential oil having antimicrobial property is thyme, lemon grass, clove and/or eucalyptus oil.
USE - For disinfecting, sanitizing or cleaning surfaces (claimed), such as leather, wood, metal, plastic, skin and fabrics.
ADVANTAGE - The novel natural aqueous-antimicrobial composition exhibits excellent disinfectant property and significantly eliminates/reduces harmful microorganisms. The composition is non-toxic and does not effect skin, eyes, lungs or coloration of products being cleaned. The composition has excellent stability, effective against wide variety of microorganisms, requires relatively low concentration of solvent, and exhibits excellent microbicidal activity for prolonged period. The non-corrosive and bio-degradable composition ensures higher killing rate and continuous germ control for hours. The composition can be easily packaged as a ready-to-use dispenser system. The composition is effectively utilized on variety of surfaces such as child high chair trays, food preparation areas, clinics, diaper change tables, toilet seats, pet areas, fitness center, training salon equipment, prosthetic and orthotic materials.
Dwg.0/0
TECH UPTX: 20020117
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The composition comprises 2-7 volume% (volume %) of **essential oil** mixture and 2-3.25 volume %, preferably 2-2.25 volume % of solvent (e.g. ethanol).
The **essential oil** mixture comprises 0.07-2.5 volume %, preferably 0.07-1.25 volume %, more preferably 0.5 volume % of thyme, 0.16-0.75 volume %, preferably. . . comprises 1-1000 ppm of an ionizing agent, and 0.05-0.5 volume % of an organic bio-surfactant.
The ionizing agent is copper sulfate, **cupric carbonate** or silver colloid, preferably 5-100 ppm of Blue Stone(TM) ions (copper sulfate).

L30 ANSWER 2 OF 26 CABA COPYRIGHT 2002 CABI
AN 2002:10254 CABA
DN 20013151570
TI Economic evaluation of fungicides for leaf blight (Alternaria alternata) control in the transplanted crop of 'Shivalik' menthol mint (Mentha arvensis)
AU Kalra, A.; Singh, H. B.; Patra, N. K.; Sushil Kumar; Kumar, S.
CS Field Station, Central Institute of Medicinal and Aromatic Plants, Pantnagar, Uttaranchal 263 145, India.
SO Indian Journal of Agricultural Sciences, (2001) Vol. 71, No. 7, pp. 460-462. 9 ref.
ISSN: 0019-5022
DT Journal
LA English
AB A study was conducted during the kharif season of 1997, 1998 and 1999 at Pantnagar, Uttar Pradesh, India to evaluate the efficacy of different fungicides in controlling leaf blight of menthol mint (Mentha arvensis), caused by Alternaria alternata, and to determine most economical optimum

application schedule. Chlorothalonil (Kavach 75 WP; 0.90 kg a.i./ha) provided maximum disease control, though the other fungicides mancozeb (Dithane M-45 75 WP; 0.90 kg a.i./ha), thiophanate-methyl (Roko 70 WP; 0.28 kg a.i./ha) and **copper oxychloride** (**Blitox 50** WP; at 0.60 kg a.i./ha) were also effective. The chlorothalonil-sprayed plots gave 45% greater yield of **essential oil** compared with the unsprayed plots. Three applications of chlorothalonil at 15-day intervals provided economically acceptable disease control with maximum increase (40%) in **essential oil** yields and total net returns (Rs 7700/ha).

AB . . . though the other fungicides mancozeb (Dithane M-45 75 WP; 0.90 kg a.i./ha), thiophanate-methyl (Roko 70 WP; 0.28 kg a.i./ha) and **copper oxychloride** (**Blitox 50** WP; at 0.60 kg a.i./ha) were also effective. The chlorothalonil-sprayed plots gave 45% greater yield of **essential oil** compared with the unsprayed plots. Three applications of chlorothalonil at 15-day intervals provided economically acceptable disease control with maximum increase (40%) in **essential oil** yields and total net returns (Rs 7700/ha).

CT application date; chemical composition; chemical control; chlorothalonil; **copper oxychloride**; crop yield; **essential oil** plants; **essential oils**; fungal diseases; fungicides; mancozeb; medicinal plants; plant composition; plant disease control; plant diseases; plant pathogenic fungi; plant pathogens; returns; thiophanate-methyl

L30 ANSWER 3 OF 26 CABA COPYRIGHT 2002 CABI

AN 2001:89958 CABA

DN 20013067688

TI A comparative study of some essential oils and fungicides as seed dressers against Alternaria tenuis in Withania somnifera

AU Jain, N. K.; Jain, P. K.; Sushil Kumar [EDITOR]; Hasan, S. A. [EDITOR]; Samresh Dwivedi [EDITOR]; Kukreja, A. K. [EDITOR]; Ashok Sharma [EDITOR]; Singh, A. K. [EDITOR]; Srikant Sharma [EDITOR]; Rakesh Tewari [EDITOR]

CS AICRP on Medicinal and Aromatic Plants, College of Agriculture, Indore - 452 001, India.

SO Journal of Medicinal and Aromatic Plant Sciences, (2001) Vol. 22/23, No. 4A/1A, pp. 192-193.
Meeting Info.: Proceedings of the National Seminar on the Frontiers of Research and Development in Medicinal Plants, Lucknow, India, 16-18 September 2000.
ISSN: 0253-7125

DT Journal; Conference Article

LA English

AB The results of a comparative study on the **essential oils** of pimpinella, vetiver, plamarosa and sacred basil and six fungicides, chlorothalonil, carbendazim, mancozeb, thiram, **copper oxychloride** and kaarmaar, as seed dressers against Alternaria tenuis [Alternaria alternata] causing seed spoilage in Withania somnifera are presented. The objective of the study was to assess the effectiveness of these **essential oils** as substitutes for fungicides at 0.1% concentration level against the normal doses of the fungicides. The percentage seed infection observed under **essential oils** and fungicides-treated seeds was superior to that in control, treatments. Among **essential oils** and fungicides, best results were obtained with palmarosa oil and carbendazim. The extent of seed infection observed with **essential oils** and fungicides ranged between 20 to 30% and 22 to 45% respectively. This suggests that **essential oils** can be used as biofungicides in place of chemical fungicides.

AB The results of a comparative study on the **essential oils** of pimpinella, vetiver, plamarosa and sacred basil and six fungicides, chlorothalonil, carbendazim, mancozeb, thiram, **copper**

oxychloride and kaarmaar, as seed dressers against Alternaria tenuis [Alternaria alternata] causing seed spoilage in Withania somnifera are presented. The objective of the study was to assess the effectiveness of these **essential oils** as substitutes for fungicides at 0.1% concentration level against the normal doses of the fungicides. The percentage seed infection observed under **essential oils** and fungicides-treated seeds was superior to that in control, treatments. Among **essential oils** and fungicides, best results were obtained with palmarosa oil and carbendazim. The extent of seed infection observed with **essential oils** and fungicides ranged between 20 to 30% and 22 to 45% respectively. This suggests that **essential oils** can be used as biofungicides in place of chemical fungicides.

CT carbendazim; chlorothalonil; **copper oxychloride**; **essential oil** plants; **essential oils**; fungal diseases; fungicides; mancozeb; medicinal plants; plant pathogenic fungi; plant pathogens; seed dressers; thiram

L30 ANSWER 4 OF 26 WPIDS (C) 2002 THOMSON DERWENT
AN 2000-365012 [31] WPIDS
DNC C2000-110123
TI Plant protectant composition for controlling fungal and bacterial infections, e.g. vine mildew, comprising aqueous suspension containing copper compound and a terpene derivative to improve activity.
DC A97 C07
IN BARSACQ, M; DUFAU, G; MOLLA, G
PA (ACTI-N) ACTION PIN SA; (ACTI-N) ACTION PIN
CYC 89
PI WO 2000024259 A1 20000504 (200031)* FR 25p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
FR 2784860 A1 20000428 (200031)
AU 9953770 A 20000515 (200039)
EP 1124424 A1 20010822 (200149) FR
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
ADT WO 2000024259 A1 WO 1999-FR2036 19990824; FR 2784860 A1 FR 1998-13381 19981026; AU 9953770 A AU 1999-53770 19990824; EP 1124424 A1 EP 1999-939497 19990824, WO 1999-FR2036 19990824
FDT AU 9953770 A Based on WO 200024259; EP 1124424 A1 Based on WO 200024259
PRAI FR 1998-13381 19981026
AB WO 200024259 A UPAB: 20000630
NOVELTY - A plant protectant, fungicidal, bactericidal or bacteriostatic composition (A) comprises a suspension of at least one copper compound (I) in an aqueous emulsion of at least one terpene derivative (II). (I) is an oxide, hydroxide or mineral acid salt of copper.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:

(i) the preparation of (A);

(ii) the use of (II) for improving the effect of (I) in plant protectant (specifically fungicidal, bactericidal or bacteriostatic) compositions; and

(iii) a method for treating plants using (A).

ACTIVITY - Antifungicidal; antibacterial; synergist.

MECHANISM OF ACTION - None given.

USE - For protecting plants against fungal infections (e.g. vine mildew, Plasmopara viticola) and bacterial infections (e.g. bacterial wilt of peach and apricot trees and Pseudomonas bacteriosis of apple and pear trees).

ADVANTAGE - (II) potentiates the antimicrobial activity of (I), so

that (I) can be used at lower dosages to reduce harmful or phytotoxic effects in the treated plants. In tests in vines artificially infected with Plasmopara viticola, treatment with copper at 2050 g/ha (as the hydroxide) plus pine oil at 650 g/ha reduced the level of damaged leaves to 22.50 %, compared with 36.25 % for treatment with 2030 g/ha of copper alone.
Dwg.0/0

TECH UPTX: 20000630
TECHNOLOGY FOCUS - AGRICULTURE - Preferred Components: (I) is **copper oxychloride, copper carbonate , cuprous oxide** or preferably **copper hydroxide.** (II) consists of monoterpene(s), preferably terpene hydrocarbons (or their oxidized derivatives), alcohols, aldehydes and/or ketones, especially a mixture of terpene hydrocarbons and alcohols. (II) is particularly in the form of an **essential oil,** specifically pine oil (preferably containing 90 % terpene alcohols). Preferred Composition: (A) contains (I) at 200-600 g/l (specifically in the form. . .

L30 ANSWER 5 OF 26 CABA COPYRIGHT 2002 CABI
AN 1999:28451 CABA
DN 991000792
TI Fungitoxicity of some higher plant products against Macrophomina phaseolina (Tassi) Goid
AU Dwivedi, S. K.; Singh, K. P.
CS Department of Mycology and Plant Pathology, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, UP 221005, India.
SO Flavour and Fragrance Journal, (1998) Vol. 13, No. 6, pp. 397-399. 15 ref. ISSN: 0882-5734
DT Journal
LA English
AB Aqueous extracts and **essential oils** of the leaves and seeds of 15 angiospermic taxa (collected at Varanasi in India) were tested in vitro against the mycelial growth of M. phaseolina. Of the samples, the **essential oil** from seeds of Trachyspermum ammi exhibited absolute toxicity (100% inhibition of mycelial growth) against the test fungus; mycelial inhibition was also high for seeds of Cuminum cyminum (89%) and leaves of Anethum graveolens (81%). The minimum inhibitory concentration of T. ammi seed oil was 200 ppm, compared with 300 ppm for thymol, isolated in 38% yield as a fungitoxic major constituent. This oil exhibited a broad fungitoxic spectrum, inhibiting the mycelial growth of a number of fungi at 100, 200 and 300 ppm. The oil was thermostable and more efficacious than some synthetic fungicides, e.g. Benlate, Ceresan, **copper oxychloride,** Dithan [Dithane] M-45 and Thiovit; it exhibited no phytotoxic properties when tested at 100, 200 and 300 ppm on seed germination of French beans (Phaseolus vulgaris).
AB Aqueous extracts and **essential oils** of the leaves and seeds of 15 angiospermic taxa (collected at Varanasi in India) were tested in vitro against the mycelial growth of M. phaseolina. Of the samples, the **essential oil** from seeds of Trachyspermum ammi exhibited absolute toxicity (100% inhibition of mycelial growth) against the test fungus; mycelial inhibition was. . . at 100, 200 and 300 ppm. The oil was thermostable and more efficacious than some synthetic fungicides, e.g. Benlate, Ceresan, **copper oxychloride,** Dithan [Dithane] M-45 and Thiovit; it exhibited no phytotoxic properties when tested at 100, 200 and 300 ppm on seed. . .
CT seeds; leaves; toxicity; fungicides; germination; benomyl; copper; sulfur; thymol; heat stability; plant extracts; **copper oxychloride; essential oils;** in vitro; **essential oil** plants; seed germination; antifungal properties; antifungal plants; plant pathology

L30 ANSWER 6 OF 26 CABA COPYRIGHT 2002 CABI DUPLICATE 1

AN 95:216081 CABA
DN 951304066
TI Evaluation of some essential oils for their toxicity against fungi causing deterioration of stored food commodities
AU Mishra, A. K.; Dubey, N. K.
CS Herbal Pesticide Laboratory, Centre of Advanced Study in Botany, Banaras Hindu Uiversity, Varanasi 221 005, India.
SO Applied and Environmental Microbiology, (1994) Vol. 60, No. 4, pp. 1101-1105. 27 ref.
ISSN: 0099-2240
DT Journal
LA English
AB During screening of **essential oils** for their antifungal activities against Aspergillus flavus, the **essential oil** of Cymbopogon citratus was found to exhibit fungitoxicity. The MIC of he oil was found to be 1,000 p.p.m., at which it showed it sfungistatic nature, wide fungitoxic spectrum, nonphytotoxic nature, and superiority over synthetic fungicides, i.e., Agrosan G. N., Thiride, Ceresan, Dithane M-45, Agrozim, Bavistin, Emison, Thivoti, wettable sulfur, and **copper oxychloride**. The fungitoxic potency of the oil remained unaltered for 7 months of storage and upon introduction of high doses of inoculum of the test fungus. It was thermostable in nature with treatment at 5 to 100 deg C. These findings thus indicate the possibility of exploitation of the **essential oil** of C. citratus as an effective inhibitor of storage fungi.
AB During screening of **essential oils** for their antifungal activities against Aspergillus flavus, the **essential oil** of Cymbopogon citratus was found to exhibit fungitoxicity. The MIC of he oil was found to be 1,000 p.p.m., at. . . and superiority over synthetic fungicides, i.e., Agrosan G. N., Thiride, Ceresan, Dithane M-45, Agrozim, Bavistin, Emison, Thivoti, wettable sulfur, and **copper oxychloride**. The fungitoxic potency of the oil remained unaltered for 7 months of storage and upon introduction of high doses of. . . in nature with treatment at 5 to 100 deg C. These findings thus indicate the possibility of exploitation of the **essential oil** of C. citratus as an effective inhibitor of storage fungi.

L30 ANSWER 7 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1995-81397 CROPU F G
TI The effects of some potential bactericides on Erwinia amylovora.
AU Hacioglu E; Momol M T
CS Univ.Akdeniz; Univ.Cornell
LO Antalya, Turk.; Geneva, N.Y., USA
SO Phytopathology (84, No. 10, 1077, 1994)
CODEN: PHYTAJ
AV Department of Plant Pathology, Cornell University, Geneva, NY 14456, U.S.A. (M.T.M.).
DT Conference
LA English
FA LA; CT; MPC
AB The effects of some chemicals and **essential oils** of origanum on Erwinia amylovora were compared with **copper-oxychloride**/maneb mixtures, known to have bactericidal effects on E. amylovora under orchard conditions and also on some bacterial diseases of tomato. Mixes of **copper-oxychloride** + maneb or mancozeb were effective bactericides against E. amylovora in agar diffusion and agar dilution tests and in Norelli and Gilpatrick's immature pear fruit test. The addition of dithiocarbamate to **copper-oxychloride** enhanced the efficacy of copper against E. amylovora. The volatile phase of the origanum **essential oil** was found to be effective as a bactericide against E. amylovora in the agar dilution test and in the

immature pear fruit test. (conference abstract) (No EX).
AB The effects of some chemicals and **essential oils** of origanum on Erwinia amylovora were compared with **copper-oxychloride**/maneb mixtures, known to have bactericidal effects on E. amylovora under orchard conditions and also on some bacterial diseases of tomato. Mixes of **copper-oxychloride** + maneb or mancozeb were effective bactericides against E. amylovora in agar diffusion and agar dilution tests and in Norelli and Gilpatrick's immature pear fruit test. The addition of dithiocarbamate to **copper-oxychloride** enhanced the efficacy of copper against E. amylovora. The volatile phase of the origanum **essential oil** was found to be effective as a bactericide against E. amylovora in the agar dilution test and in the immature. . .

L30 ANSWER 8 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1994-80642 CROPU C F
TI Chemical and Antifungal Studies of the Essential Oil of Aegle marmelos (L.) Corr.
(Chemische und fungitoxische Untersuchungen des essentiellen Oels von Aegle marmelos (L.) Corr)
AU Singh G; Srivastava P; Mallavrapu G R; Ramesh S; Rao G P
CS Univ.Gorakhpur
LO Gorakhpur, India
SO Parfuem.Kosmet. (74, No. 11, 714, 716-20, 1993) 1 Fig. 5 Tab. 21 Ref.
CODEN: PAKOAL
AV Department of Chemistry, University of Gorakhpur, Gorakhpur, India.
DT Journal
LA German
FA AB; LA; CT; MPC
AB The **essential oil** from leaves of Aegle marmelos (L.) Corr. (Rutaceae), a plant widely distributed in India, Burma and Sri Lanka, has been found to possess potent in-vitro antifungal activity. The oil was tested against Aspergillus flavus, A. niger, A. fumigatus, Epicoccum nigrum, Ceratocystis paradoxa, Colletotrichum falcatum, C. capsici, Curvularia lunata, C. pallescens, Fusarium moniliforme, F. oxysporum, Periconia atropurpurea and Rhizoctonia solani; it showed no phytotoxic effects on rice seedlings up to 3000 ppm. GLC analysis of the oil identified 27 monoterpenes and 29 sesquiterpenes; the major constituent 1,8-cineole (eucalyptol) is the likely source of the activity. The oil may be used as a non-toxic natural fungicide against pathogenic fungi.
AB The **essential oil** from leaves of Aegle marmelos (L.) Corr. (Rutaceae), a plant widely distributed in India, Burma and Sri Lanka, has been. . .
ABEX The **essential oil** showed absolute fungitoxicity at 3000 ppm against A. flavus, E. nigrum, F. moniliforme, F. oxysporum and R. solani with 100%. . . 1.5 fold more potent than these fungicides against C. falcatum. It was also 1.5 fold more active than Bavistin (carbendazim), **Blitox** (**copper oxychloride**) and Topsin-M against C. pallescens. The major volatile constituents of the oil were 1,8-cineole (27.15%), beta-caryophyllene (17.54%) and alpha-phellandrene (13.31%);. . .

L30 ANSWER 9 OF 26 CABA COPYRIGHT 2002 CABI
AN 93:23078 CABA
DN 932327873
TI Fungitoxic evaluation of essential oils extracted from higher plants against some sugarcane pathogens in vitro
AU Rao, C. P.; Singh, M.; Singh, H. N.
CS G.S. Sugarcane Breeding and Research Institute, Seorahi, Uttar Pradesh, India.
SO Tropical Science, (1992) Vol. 32, No. 4, pp. 377-382. 23 ref.

ISSN: 0041-3291
DT Journal
LA English
AB The **essential oils** extracted from different parts of 7 higher plants were screened for their fungitoxicity against sugarcane pathogens. The **essential oils** extracted from seeds of Cuminum cyminum (cumin) and dry flower buds of Syzigium aromaticum (cloves) were fungitoxic to Colletotrichum falcatum [Glomerella tucumanensis], Curvularia [Cochliobolus] pallescens and Periconia atropurpurea. At 1000 p.p.m. these extracts were fungistatic but were fungicidal at 2000 and 3000 p.p.m. The **essential oils** were standardized by studying their various physicochemical properties. The fungitoxicity of the oils was thermostable and toxicity remained unchanged even on autoclaving (121 deg C for 20 min) and on storage for up to 6 months (at room temp.). Both the oils were more effective than some synthetic fungicides commonly used on sugarcane, including carbendazim, **copper oxychloride**, mancozeb and thiophanate-methyl, in vitro and were non-phytotoxic up to 3000 p.p.m. The aldehyde fraction of C. cyminum oil and phenolic fraction of S. aromaticum oil contained the main fungitoxic constituents, respectively. Among other oils extracted, Foeneculum vulgare seed oil at 3000 p.p.m. and Eupatorium capillifolium leaf oil at 2000 and 3000 p.p.m. completely inhibited mycelial growth of G. tucumanensis and P. atropurpurea in vitro. The oil extracted from leaves of Ocimum basilicum also checked the growth of all the fungi at 3000 p.p.m.
AB The **essential oils** extracted from different parts of 7 higher plants were screened for their fungitoxicity against sugarcane pathogens. The **essential oils** extracted from seeds of Cuminum cyminum (cumin) and dry flower buds of Syzigium aromaticum (cloves) were fungitoxic to Colletotrichum falcatum. . . pallescens and Periconia atropurpurea. At 1000 p.p.m. these extracts were fungistatic but were fungicidal at 2000 and 3000 p.p.m. The **essential oils** were standardized by studying their various physicochemical properties. The fungitoxicity of the oils was thermostable and toxicity remained unchanged even. . . months (at room temp.). Both the oils were more effective than some synthetic fungicides commonly used on sugarcane, including carbendazim, **copper oxychloride**, mancozeb and thiophanate-methyl, in vitro and were non-phytotoxic up to 3000 p.p.m. The aldehyde fraction of C. cyminum oil and. . .

L30 ANSWER 10 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1992-85134 CROPU F G
TI Evaluation of Fungicides for Control of Downy Mildew of Cantaloupe, 1991.
AU Chellemi D O; Olson S M; Dankers H A; Snell J M
LO Quincy, Fla., USA
SO Fungic.Nematic.Tests (47, 84, 1992) 1 Tab.
CODEN: FNETDO
AV North Florida Research and Education Center, Route 3, Box 4370, Quincy, FL 32351, U.S.A.
DT Journal
LA English
FA AB; LA; CT
AB Pulsar cantaloupe, planted on 29 July, was sprayed with Aliette 80WP (fosetyl aluminum) + **Kocide 101** 50WP (**copper hydroxide**) at 2 + 2 lb/A, Aliette 80WP at 2 or 3 lb/A, and a pre-mix of Ridomil (metalaxyl)/Bravo (chlorothalonil) 81W at 2 lb/A on 6, 13, 20 and 27 Sept for control of downy mildew (Pseudoperonospora cubensis). Mildew was present in moderate levels at the 1st fungicide application, but subsequent disease pressure was severe, with control plots defoliated by 3 Oct. All treatments performed well up to 3 Oct., after which only Ridomil/Bravo continued to suppress disease severity to an acceptable level. Some phytotoxicity was observed with all treatments, but was most noticeable with Aliette + **Kocide**. No

differences in yield were observed, although there were some slight differences in fruit weight.

AB Pulsar cantaloupe, planted on 29 July, was sprayed with Aliette 80WP (fosetyl aluminum) + **Kocide 101** 50WP (**copper hydroxide**) at 2 + 2 lb/A, Aliette 80WP at 2 or 3 lb/A, and a pre-mix of Ridomil (metalaxyl)/Bravo (chlorothalonil) 81W. . . disease severity to an acceptable level. Some phytotoxicity was observed with all treatments, but was most noticeable with Aliette + **Kocide**. No differences in yield were observed, although there were some slight differences in fruit weight.

ABEX. . . 3EC (endosulfan) 42 oz/A was applied on 19 Aug, 2 and 17 Sept, and Pyrellin EC (pyrethrins + rotenone + **essential oil** adjuvants) 2 pt/A on 2 Sept for insect control. All fungicide applications were made with a CO2-powered backpack sprayer delivering. . .

L30 ANSWER 11 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1991-81876 CROPU P F
TI Fungitoxicity of Essential Oil of Amomum subulatum Against Aspergillus flavus.
AU Mishra A K; Dubey N K
LO Varanasi, India.
SO Econ.Bot. (44, No. 4, 530-33, 1991) 1 Fig. 1 Tab. 11 Ref.
CODEN: ECBOA5
AV Herbal Pesticides Laboratory, Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi 221 005, India.
DT Journal
LA English
FA AB; LA; CT
AB In-vitro fungitoxicity of **essential oils** from leaves of Aegle marmelos (Bengal quince), Ageratum houstonianum, Alpinia galanga (galangal), Amomum subulatum, Artemsia vulgaris (mugwort), turmeric, cardamom, Lippia alba and Salvia plebeia was tested. At 5000 ppm, A. subulatum oil gave 100% inhibition of Aspergillus flavus growth. Further studies with A. subulatum oil determined a minimum inhibitory concentration of 3000 ppm for 13 other Aspergillus, Alternaria, Cladosporium, Colletotrichum, Curvularia, Fusarium, Helminthosporium and Pencillium spp. No phytotoxicity was shown in germination of rice seeds at 76, 96 and 120 hrs exposure. A. marmelos oil was 1.33, 1.66, 2, 2.66 and 2.66 times more active against A. flavus than Agrosan GN, Ceresan, Thiovit (sulfur), **copper oxychloride** and Dithane M-45 (mancozeb), respectively.
AB In-vitro fungitoxicity of **essential oils** from leaves of Aegle marmelos (Bengal quince), Ageratum houstonianum, Alpinia galanga (galangal), Amomum subulatum, Artemsia vulgaris (mugwort), turmeric, cardamom, Lippia. . . oil was 1.33, 1.66, 2, 2.66 and 2.66 times more active against A. flavus than Agrosan GN, Ceresan, Thiovit (sulfur), **copper oxychloride** and Dithane M-45 (mancozeb), respectively.
ABEX The **essential oils** tested and their % inhibition against A. flavus were: Aegle marmelos 85%, A. houstonianum 85%, A. galanga 85%, A. subulatum. . .

L30 ANSWER 12 OF 26 CABA COPYRIGHT 2002 CABI
AN 94:101187 CABA
DN 941301417
TI Effect of essential oils of some higher plants on Aspergillus flavus link. Infesting stored seeds of Guar (Cyamopsis tetragonoloba L. (Taub.))
AU Dwivedi, S. K.; Dwivedi, S. K.; Pandey, V. N.; Dubey, N. K.
CS Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi 221005, India.
SO Flavour and Fragrance Journal, (1991) Vol. 6, No. 4, pp. 295-297. 13 ref.
ISSN: 0882-5734

DT Journal
LA English
AB The **essential oils** from leaves and seeds of angiosperms in Varanasi, India, as well as from local markets were tested against the mycelial growth of Aspergillus flavus. The volatile oil from seeds of Daucus carota exhibited complete toxicity against the test fungus. The min. inhibitory concn of the oil at which it exhibited fungistasis was 2000 p.p.m. when it was not phytotoxic on seed germination and seedling growth of guar, Cyamopsis tetragonoloba. It exhibited a broad fungitoxic spectrum inhibiting the mycelial growth of a number of fungi at 1500, 2000 and 2500 p.p.m. Moreover, the oil was more effective than some synthetic fungicides including Agrosan G.N., **copper oxychloride**, Derosal, Dithane M-45 and Thiovit.
AB The **essential oils** from leaves and seeds of angiosperms in Varanasi, India, as well as from local markets were tested against the mycelial. . . fungi at 1500, 2000 and 2500 p.p.m. Moreover, the oil was more effective than some synthetic fungicides including Agrosan G.N., **copper oxychloride**, Derosal, Dithane M-45 and Thiovit.

L30 ANSWER 13 OF 26 CABA COPYRIGHT 2002 CABI
AN 92:53081 CABA
DN 921211726
TI Fungistatic properties of essential oil of Cinnamomum camphora
AU Mishra, A. K.; Dwivedi, S. K.; Kishore, N.; Dubey, N. K.
CS Herbal Pesticides Laboratory, Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi - 221 005, India.
SO International Journal of Pharmacognosy, (1991) Vol. 29, No. 4, pp. 259-262. 10 ref.
ISSN: 0925-1618
DT Journal
LA English
AB During screening of **essential oils**, the oil of C. camphora was found to possess fungistatic activity against Aspergillus flavus at 4000 p.p.m. It also showed activity at this concn against 9 of 20 other fungi tested (including Alternaria alternata, Aspergillus spp., Cladosporium herbarum, Colletotrichum, Helminthosporium spp.). Moreover, the oil was found to be as potent as some synthetic preservatives commonly used in storage of foodstuffs (ceresan, **copper oxychloride**, dithane M-45 and thiovit).
AB During screening of **essential oils**, the oil of C. camphora was found to possess fungistatic activity against Aspergillus flavus at 4000 p.p.m. It also showed. . . Moreover, the oil was found to be as potent as some synthetic preservatives commonly used in storage of foodstuffs (ceresan, **copper oxychloride**, dithane M-45 and thiovit).

L30 ANSWER 14 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1992-82675 CROPU F
TI Fungistatic Properties of Essential Oil of Cinnamomum camphora.
AU Mishra A K; Dwivedi S K; Kishore N; Dubey N K
LO Varanasi, India
SO Int.J.Pharmacogn. (29, No. 4 259-62, 1991) 3 Tab. 10 Ref.
AV Herbal Pesticides Laboratory, Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi - 221 005, India.
DT Journal
LA English
FA AB; LA; CT
AB **Essential oils** of the camphor tree, Nepeta hindostana, Seseli indicum, American arborvitae and Vitex negundo have been evaluated for their potential fungistatic properties towards Aspergillus flavus at 5000 ppm using a poisoned food technique. Only the oil of the camphor tree exhibited absolute fungitoxicity against the test

fungus with a minimum effective concentration of 4000 ppm. In further tests, the oil possessed a broad fungitoxic spectrum inhibiting 9 and 14 fungi at 4000 ppm and 5000 ppm, respectively, out of 20 tested. Camphor tree oil was found to be more efficacious than Agrosan GN, Ceresan, **copper oxychloride**, Dithane M-45 (mancozeb), and Thiovit (sulfur).

AB **Essential oils** of the camphor tree, Nepeta hindostana, Seseli indicum, American arborvitae and Vitex negundo have been evaluated for their potential fungistatic. . . 5000 ppm, respectively, out of 20 tested. Camphor tree oil was found to be more efficacious than Agrosan GN, Ceresan, **copper oxychloride**, Dithane M-45 (mancozeb), and Thiovit (sulfur).

L30 ANSWER 15 OF 26 CABA COPYRIGHT 2002 CABI
AN 90:131910 CABA
DN 901362447
TI Antifungal activity of some essential oils
AU Mishra, A. K.; Dwivedi, S. K.; Kishore, N.
CS Herbal Pesticides Laboratory, Centre of Advanced Study in Botany, Banaras Hindu University, Varanasi-221 005, India.
SO National Academy Science Letters, (1989) Vol. 12, No. 10, pp. 335-336. 6 ref.
ISSN: 0250-541X
DT Journal
LA English
AB During screening of **essential oils** isolated from leaves of 11 spp. of higher plants for their fungitoxicity against Aspergillus flavus at 2000, 3000, 4000 and 5000 p.p.m., the oils of Chenopodium ambrosioides, Cinnamomum zeylanicum, Citrus medica, Melaleuca leucadendron, Ocimum canum and O. grattissimum proved most effective, inhibiting the test fungus at 2000 p.p.m. The others were effective at higher concn. Moreover, most of the oils were more efficacious than synthetic fungicides, viz, agrosan G.N., ceresan, **copper oxychloride**, dithane M-45 and thiovit.
AB During screening of **essential oils** isolated from leaves of 11 spp. of higher plants for their fungitoxicity against Aspergillus flavus at 2000, 3000, 4000 and. . . were effective at higher concn. Moreover, most of the oils were more efficacious than synthetic fungicides, viz, agrosan G.N., ceresan, **copper oxychloride**, dithane M-45 and thiovit.

L30 ANSWER 16 OF 26 CABA COPYRIGHT 2002 CABI
AN 89:79987 CABA
DN 891129655
TI Efficacy of Ocimum oil against fungi attacking chilli seed during storage
AU Asthana, A.; Dixit, K.; Tripathi, N. N.; Dixit, S. N.
CS Natural Pesticide Lab., Dep. Bot., Univ. Gorakhpur, Gorakhpur 273 009, India.
SO Tropical Science, (1989) Vol. 29, No. 1, pp. 15-20. 26 ref.
ISSN: 0041-3291
DT Journal
LA English
AB Seeds of chilli (Capsicum annuum), treated with the **essential oil** of O. adscendens and Bavistin [carbendazim], **Blitox-50** [copper oxycloride] and Dithane M-45 [mancozeb], were stored in jute bags and tin containers for 12 months. The oil protected the seeds completely from fungal development and gave better control than the synthetic fungicides. The oil did not show any adverse effect on seed germination or seedling growth.
AB Seeds of chilli (Capsicum annuum), treated with the **essential oil** of O. adscendens and Bavistin [carbendazim], **Blitox-50** [copper oxycloride] and Dithane M-45 [mancozeb], were stored in jute bags and tin containers for 12 months. The oil protected. . .

L30 ANSWER 17 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1988-80178 CROPU F P
TI Adenocalymma allicea, a New Source of a Natural Fungitoxican
AU Chaturvedi R; Dikshit A; Dixit S N
LO Gorakhpur, India
SO Trop.Agric. (64, No. 4, 318-22, 1987) 8 Tab. 29 Ref. (AL)
AV Natural Pesticide Laboratory, Department of Botany, Gorakhpur University, Gorakhpur-273001, India.
DT Journal
LA English
FA AB; LA; CT; MPC
AB Fungitoxic activity of an **essential oil** extracted from fresh leaves of Adenocalymma allicea was studied. MIC, fungicidal/fungistatic action, and effects of exposure duration, inoculum density, temperature and storage (7-28 days at 8-37 deg) on the oil's activity against Drechslera (Helminthosporium) oryzae were determined. The oil caused complete inhibition of 21 Alternaria, Aspergillus, Cephalosporium (Acremonium), Cladosporium, Colletotrichum, Fusarium, Macrophomina, Paecilomyces, Penicillium, Rhizoctonia and Talaromyces spp. at 1000 ppm, with slightly less activity at 500 and 700 ppm. The oil had comparable activity to **Blitox 50** (CuOCl), Karathane (dinocap), Dithane M-45 (mancozeb), Hinosan 50 (edifenphos) and Ceresan (methoxyethylmercuric chloride, in tests on D. oryzae in-vitro, and was non-phytotoxic to rice, giving good in-vivo D. oryzae control.
AB Fungitoxic activity of an **essential oil** extracted from fresh leaves of Adenocalymma allicea was studied. MIC, fungicidal/fungistatic action, and effects of exposure duration, inoculum density, temperature. . . Talaromyces spp. at 1000 ppm, with slightly less activity at 500 and 700 ppm. The oil had comparable activity to **Blitox 50** (CuOCl), Karathane (dinocap), Dithane M-45 (mancozeb), Hinosan 50 (edifenphos) and Ceresan (methoxyethylmercuric chloride, in tests on D. oryzae in-vitro, and. . .
ABEX. . . As. fumigatus, As. japonicus, As. niger, As. terreus and As. versicolor. In tests against D. oryzae, MICs for the oil, **Blitox** , Karathane, Dithane M-45, Hinosan and Ceresan were 500, 5000, 5000, 5000, 2000 and 2000 ppm, respectively. In rice, the oil. . .

L30 ANSWER 18 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1987-82484 CROPU F
TI Fungitoxic and Phytotoxic Studies with Essential Oil of Ocimum adscendens.
AU Asthana A; Tripathi N N; Dixit S N
LO Gorakhpur, India
SO J.Phytopathol. (117, No. 2, 152-59, 1986)
DT Journal
LA English
FA AB; LA; CT
AB In comparisons of aqueous extracts of fresh leaves from 27 species, that of Ocimum adscendens had the strongest fungicidal action, completely inhibiting Aspergillus flavus mycelial growth. The O. adscendens leaf extract was more active than extracts of the stem, root or flower. The **essential oil** from O. adscendens leaves gave 98-100% inhibition of 29 Alternaria, Aspergillus, Botrytis, Cladosporium, Colletotrichum, Curvularia, Fusarium, Glomerella, Helminthosporium, Penicillium, Rhizopus, Syncephalastrum and Trichothecium spp. at 0.04-0.05%. The **essential oil** was more effective against As. flavus in-vitro than carbendazim (Bavistin), Cu oxychloride (**Blitox 50**), mancozeb (Dithane M-45), Agrosan GN and zineb (Dithane Z-78).
AB. . . flavus mycelial growth. The O. adscendens leaf extract was more active than extracts of the stem, root or flower. The **essential oil** from O. adscendens leaves gave 98-100% inhibition of 29

Alternaria, Aspergillus, Botrytis, Cladosporium, Colletotrichum, Curvularia, Fusarium, Glomerella, Helminthosporium, Penicillium, Rhizopus, Syncephalastrum and Trichothecium spp. at 0.04-0.05%. The **essential oil** was more effective against As. flavus in-vitro than carbendazim (Bavistin), Cu oxychloride (**Blitox 50**), mancozeb (Dithane M-45), Agrosan GN and zineb (Dithane Z-78).

ABEX. . . and stem extracts of O. adscendens gave 100, 0, 80 and 20% inhibition of As. flavus, respectively. O. adscendens leaf **essential oil** was isolated and standardized. At 0.04-0.05%, the oil gave 98-100% inhibition of in-vitro growth of Alternaria alternata, Al. citri, Aspergillus. . .

L30 ANSWER 19 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1987-80532 CROPU F
TI Fungicidal Control of Leaf Blight Disease of Palmarosa Caused by Ellisiella caudata (PK.) Sacc.
AU Gupta M L; Janardhanan K K; Husain A
LO Lucknow, India
SO Pesticides (20, No. 2, 35-37, 1986) 4 Tab. 16 Ref.
CODEN: PSTDAN
AV Division of Plant Pathology, Central Institute of Medicinal and Aromatic Plants, Post Bag No. 1, P.O. R.S.M. Nagar, Lucknow-226016, India.
DT Journal
LA English
FA AB; LA; CT
AB Laboratory bioassay of 11 fungicides against Ellisiella (Colletotrichum) caudata showed that Benlate (benomyl), Calixin (tridemorph) and thiram inhibited pathogen growth at 100 ppm. Difolatan (captafol), Dithane M-45 (mancozeb), Dithane Z-78 (zineb), **Blitox** (**copper-oxychloride**) and captan were also effective but at higher levels. In the field, sprays were applied when symptoms appeared, and 3 more times at 10-day intervals; Difolatan, Benlate and Calixin were the most effective in disease control on palmarosa, and increased herbage yield. Consequently, **essential oil** production from the crop increased as a result of disease control. Also tested but less effective in-vitro were Hexasul (sulfur), Cuman (ziram), and Brassicol (quintozene).

AB. . . Benlate (benomyl), Calixin (tridemorph) and thiram inhibited pathogen growth at 100 ppm. Difolatan (captafol), Dithane M-45 (mancozeb), Dithane Z-78 (zineb), **Blitox** (**copper-oxychloride**) and captan were also effective but at higher levels. In the field, sprays were applied when symptoms appeared, and 3. . . 10-day intervals; Difolatan, Benlate and Calixin were the most effective in disease control on palmarosa, and increased herbage yield. Consequently, **essential oil** production from the crop increased as a result of disease control. Also tested but less effective in-vitro were Hexasul (sulfur),. . .

ABEX. . . results and reduced infection to 19.46, 21.95 and 22.32% and gave 74.33, 71.04 and 70.55% disease control, respectively. Captan and **Blitox-50** were less effective. All treatments increased herbage yield to a considerable extent as compared to control. The analysis of leaves. . .

L30 ANSWER 20 OF 26 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1986-80801 CROPU F
TI Toxicity of Essential Oil from a New Strain of Ocimum gratissimum (Clocimum) Against Betelvine Pathogenic Fungi.
AU Tripathi R D; Banerji R; Sharma M L; Balasubrahmanyam V R; Nigam S K
LO Lucknow, India
SO Agric.Biol.Chem. (49, No. 8, 2277-82, 1985) 2 Fig. 3 Tab. 23 Ref. (RLB)
CODEN: ABCHA6
AV National Botanical Research Institute, Rana Pratap Marg, Lucknow 226001,

India.
DT Journal
LA English
FA AB; LA; CT; MPC
AB The **essential oil** from leaves of Clocimum, a new hybrid strain of eugenol-type Ocimum gratissimum, was fungistatic to Sclerotium rolfsii, Alternaria alternata and Colletotrichum capsici (pathogens of betel) at MICs of 50, 250 and 500 ppm respectively. The oil was fungicidal at higher concentrations, equal or better than commercial fungicides Dithane-M-45 (mancozeb), **Blitox 50** (**copper-oxychloride**), Bavistin (carbendazim) and Ridomil (metalaxyl) and non-phytotoxic to betel. Eugenol was the main fungicidal constituent of the oil (81%). Other components were myrcene, beta-pinene, 1,8-cineole (eucalyptol), p-cymene, camphor, linalyl-acetate, alpha-terpineol, alpha-terpinyl-acetate linalool, geraniol, citronellol, methyl-chavicol (estragole), methyleugenol, and beta-caryophyllene.
AB The **essential oil** from leaves of Clocimum, a new hybrid strain of eugenol-type Ocimum gratissimum, was fungistatic to Sclerotium rolfsii, Alternaria alternata and. . . 250 and 500 ppm respectively. The oil was fungicidal at higher concentrations, equal or better than commercial fungicides Dithane-M-45 (mancozeb), **Blitox 50** (**copper-oxychloride**), Bavistin (carbendazim) and Ridomil (metalaxyl) and non-phytotoxic to betel. Eugenol was the main fungicidal constituent of the oil (81%). Other. . .

L30 ANSWER 21 OF 26 CABA COPYRIGHT 2002 CABI
AN 83:11800 CABA
DN 830313888
TI Fungitoxic properties of essential oil of Mentha arvensis var. piperascens
AU Singh, A. K.; Dikshit, A.; Dixit, S. N.
CS Gorakhpur University, Gorakhpur, India.
SO Perfumer & Flavorist, (1983) Vol. 8, No. 1, pp. 55-58. 31 ref.
DT Journal
LA English
AB Peppermint oil from which menthol had been removed showed marked fungitoxic activity against the test sp. Helminthosporium oryzae. At the minimum inhibitory concentration of 2000 p.p.m. the oil also showed a wide range of activity against other fungi and was more effective than carbendazim, copper oxychloride, quintozene, zineb and edifenphos. The major physico-chemical properties of the oil are tabulated.
CT Carbendazim; **Copper oxychloride**; Quintozene; Zineb; Edifenphos; plant composition; **essential oils**; biochemistry; fungicidal properties; **essential oil** plants; pesticidal plants

L30 ANSWER 22 OF 26 CROPB COPYRIGHT 2002 THOMSON DERWENT
AN 84-80930 CROPB F P
TI CEDRUS OIL - A PROMISING STORAGE FUNGITOXICANT.
AU DIKSHIT A; DUBEY N K; TRIPATHI N N; DIXIT S N
LO GORAKHPUR,INDIA.
SO J.STORED PROD.RES. (19, NO.4, 159-62, 1983)
LA English
DT Journal
IT PLANT-SUBSTANCE GYMNOSPERM DEODAR **ESSENTIAL OIL** CF. FUNGICIDE 2-METHOXYETHYLMERCURY-CHLORIDE PMA **COPPER-OXYCHLORIDE** ETC. SEED TREATMENT CONTROL MUCORALES ABSIDIA SP. RHIZOPUS SPP. ASPERGILLUS FLAVUS FUMIGATUS NIGER RUBER VERSICOLOR MONILIALES CURVULARIA LUNATA PAECILOMYCES VARIOTII. . .

L30 ANSWER 23 OF 26 CROPB COPYRIGHT 2002 THOMSON DERWENT
AN 82-87220 CROPB F

TI FUNGITOXIC AND PHYTOTOXIC PROPERTIES OF THE ESSENTIAL OIL OF CAESULIA AXILLARIS ROXB. /COMPOSITAE/.
AU PANDEY D K; TRIPATHI N N; TRIPATHI R D; DIXIT S N
LO GORAKHPUR,INDIA.
SO ANGEW.BOTAN. (56, NO.3-4, 259-67, 1982)
LA English
DT Journal
IT **ESSENTIAL OIL** COMPOSITAE CAESULIA AXILLARIS CF. FUNGICIDE **COPPER-OXYCHLORIDE** FUNGICIDE-I CARBAMATE CARBENDAZIME ETC. SEED TREATMENT CONTROL HELMINTHOSPORIUM ORYZAE ALSO ALTERNARIA ASPERGILLUS FUSARIUM ETC. SPP. ABSENCE PHYTOTOXICITY RICE LAB. AND. . .

L30 ANSWER 24 OF 26 CROPB COPYRIGHT 2002 THOMSON DERWENT
AN 81-83391 CROPB F
TI CONTROL OF DISEASES OF CORIANDER.
AU SAVENKO L A; PINKOVSKII A S
LO USSR.
SO ZASHCH.RAST. (NO.2, 54, 1981)
LA Russian
DT Journal
IT FUNGICIDE THIURAM THIRAM **COPPER-OXYCHLORIDE** FUNGICIDE-CS ZINC ZINEB SEED TREATMENT ETC. REPEAT APPLICATION PHYS.CONTROL SANITATION CONTROL MONILIALES RAMULARIA SPP. FUSARIUM SPP. ETC. INFLUENCE ON **ESSENTIAL OIL** ESTER YIELD AROMATIC CORIANDER
BACTERIUM WINTER WHEAT SUNFLOWER MILLET BUCKWHEAT LEGUME MAIZE SUGAR-BEET

L30 ANSWER 25 OF 26 CROPB COPYRIGHT 2002 THOMSON DERWENT
AN 76-87792 CROPB F
TI FUNGICIDES AGAINST RUST OF ROSES.
AU ZHALNINA L S
LO USSR.
SO KHIM.SEL.KHOZ. (14, NO.8, 55-56, 1976)
DT Journal
IT DINOCAP FUNGICIDE **COPPER-OXYCHLORIDE** BORDEAUX-MIXTURE NAPHTHOQUINONE DICHLONE FUNGICIDE-CS THIURAM METIRAM ZINC ZINEB INFLUENCE OF CLIMATE WEATHER ON CONTROL UREDINALES PHRAGMIDIUM MUCRONATUM HELOTIALES DIPLOCARPON ROSAE PHYTOTOXICITY INFLUENCE ON CHLOROPHYLL YIELD **ESSENTIAL-OIL** ORNAMENTAL-PLANT ROSE

L30 ANSWER 26 OF 26 CABA COPYRIGHT 2002 CABI
AN 75:9495 CABA
DN 740323703
TI Remedies for lavender septoriosis
AU Zhukova, L. M.
CS VNII Efirnomaslichnykh Kul'tur, Crimea, USSR.
SO Zashchita Rastenii, (1974) No. 7, pp. 27.
DT Journal
LA Russian
AB In 2 years' trials 3 annual applications of 0.5% zineb reduced Septoria sp. infection of lavender by 69.5%, 0.5% copper oxychloride by 55.0%, and 1% bordeaux mixture by 67.7%.
CT **Copper oxychloride**; Bordeaux mixture; diseases; control; **essential oil** plants

L33 ANSWER 1 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 2001-655916 [75] WPIDS
DNC C2001-192843

TI Antifriction self-lubricating composition.
DC A97 E19 H07
IN BORODAI, A V; KLIMENKO, A V; PONOMAREV, V I
PA (NCPO) UNIV NOVCH TECH
CYC 1
PI RU 2172751 C2 20010827 (200175)* 5p
ADT RU 2172751 C2 RU 1999-107343 19990409
PRAI RU 1999-107343 19990409
AB RU 2172751 C UPAB: 20011220
NOVELTY - Antifriction composition comprises polytetrafluoroethylene, **cuprous oxide**, glycerol, abietic acid, pentaerythrite and palmitic acid ester, and triphenyl phosphine. Composition further comprises Vaseline oil, **terpentine** oil, acrylic copolymer and polyethylene, ratios of components being as follows, wt %: polytetrafluoroethylene, 1-3; **cuprous oxide**, 30-45; glycerol, 5-9; abietic acid, 6-10; pentaerythrite and palmitic acid ester, 0.2-2; triphenyl phosphine, 0.3-1; Vaseline oil, 3-5; **terpentine** oil, 3-5; acrylic copolymer, 5-9; and polyethylene, the balance.
USE - Machine-building, instrument making, aircraft and ship building industries.
ADVANTAGE - Higher antifriction properties and wear resistance of the composition.
Dwg.0/0
AB RU 2172751 UPAB: 20011220
NOVELTY - Antifriction composition comprises polytetrafluoroethylene, **cuprous oxide**, glycerol, abietic acid, pentaerythrite and palmitic acid ester, and triphenyl phosphine. Composition further comprises Vaseline oil, **terpentine** oil, acrylic copolymer and polyethylene, ratios of components being as follows, wt %: polytetrafluoroethylene, 1-3; **cuprous oxide**, 30-45; glycerol, 5-9; abietic acid, 6-10; pentaerythrite and palmitic acid ester, 0.2-2; triphenyl phosphine, 0.3-1; Vaseline oil, 3-5; **terpentine** oil, 3-5; acrylic copolymer, 5-9; and polyethylene, the balance.
USE - Machine-building, instrument making, aircraft and ship building industries.. . .

L33 ANSWER 2 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1999-384226 [32] WPIDS
CR 1996-097761 [10]; 1996-188719 [19]; 1998-007997 [01]; 1998-086369 [08]; 1998-378040 [32]; 1998-609264 [51]; 1999-370609 [31]; 1999-561109 [47]; 2000-222146 [10]; 2000-464036 [38]; 2001-168218 [17]; 2001-624248 [49]
DNN N1999-287673 DNC C1999-112945
TI A composition comprising stable electrophoretic particles, useful in electrophoretic display devices.
DC A18 A85 A97 E24 L03 P81 U14
IN GORDON, J G; HART, M W; SWANSON, S A
PA (IBMC) INT BUSINESS MACHINES CORP
CYC 1
PI US 5914806 A 19990622 (199932)* 6p
ADT US 5914806 A US 1998-21768 19980211
PRAI US 1998-21768 19980211
AB US 5914806 A UPAB: 20011211
NOVELTY - A composition useful in electrophoretic display devices comprising a pigment particle covalently bonded to a polymeric stabilizer.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an electrophoretic display comprising cells containing pigment particles covalently bonded to polymeric stabilizers and suspended in a light-transmissive fluid, each cell comprising a light-transmissive front window, a collecting and counter electrode and a rear panel.
USE - The composition comprising a pigment particle covalently bonded to a polymeric stabilizer is useful in electrophoretic display devices.
ADVANTAGE - The pigment particles are effectively stabilized and suspended to minimise agglomeration.

Dwg.0/2
TECH. . .
is monofunctionalized polystyrene, polylauryl methacrylate, poly(1,2-hydroxystearic acid), polydimethylsiloxane, polyisobutylene, cis-1,4-polyisoprene, polyvinyl acetate, polymethyl methacrylate, polyvinyl methyl ether, poly(4-methylstyrene), polyethylene, polybutadiene, **terpene** resin, petroleum hydrocarbon resin or a halogenated analogue of these.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred pigment: The pigment has. . . 97, 150 and 151, Acid Yellow 34, 40, 42, 76 and 99, Alizarin Blue Black B, Alizarine Red, Alizarin Yellow **GG**, Biebrich Scarlet, Brilliant Crocein MOO, Brilliant Yellow, Bromochlorophenol Blue, Bromocresol Green, Bromocresol Purple, Bromophenol Blue, Bromopyrogallol Red, Bromothymol Blue, Bromoxylenol. . . Blue and Orange and Xyliidyl Blue 1; or has carboxylic acid group(s) or derivative(s) and is selected from Alizarin Yellow **GG**, Lucifer Yellow anhydride, Calcein Blue, Carmine, Carminic acid, Celestine Blue, Chrome Azurol S, Chromoxane Cyanine R, Coumarin 343, Solvent Red. . .

L33 ANSWER 3 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1999-303153 [26] WPIDS
DNC C1999-089067
TI Algaecidal composition comprising a terpene, emulsifier and copper complex.
DC C03
IN KIERKOWSKI, D J; PUETZ, J D; WEI, G; KIERZKOWSKI, D J
PA (LAPO) LAPORTE WATER TECHNOLOGIES & BIOCHEM INC
CYC 3
PI AU 9886143 A 19990415 (199926)* 12p
CA 2248422 A1 19990323 (199936) EN
US 6069113 A 20000530 (200033)
AU 742225 B 20011220 (200208)
ADT AU 9886143 A AU 1998-86143 19980922; CA 2248422 A1 CA 1998-2248422 19980922; US 6069113 A Provisional US 1997-59757P 19970923, US 1998-152182 19980914; AU 742225 B AU 1998-86143 19980922
FDT AU 742225 B Previous Publ. AU 9886143
PRAI US 1998-152182 19980914; US 1997-59757P 19970923
AB AU 9886143 A UPAB: 20011211
NOVELTY - A composition comprising from about 0.1 to less than about 5% by weight of terpene, from about 1-20% by weight of an emulsifier comprising the reaction product of tall oil fatty acid and an alcohol amine and from about 10-99% by weight of a copper complex.
ACTIVITY - Antialgal.
USE - The composition can be used for effectively controlling algae in water.
A portion of pond of approximately 0.81 ha in area and having an average depth of 1.22m and having a heavy infestation of algae was treated with (I) at a rate of approximately 23 L/ha.m to provide a copper concentration of approximately 0.25 ppm. After a period of 3 days, more than 95% of the algae had disappeared from the water surface.
ADVANTAGE - The composition is an effective antialgal agent without the need for copper sulfate which is chemically unstable in water.
TECH UPTX: 19990707
TECHNOLOGY FOCUS - AGRICULTURE - Preferred Composition: The **terpene** is preferably present from about 0.1-3% by weight (especially 0.3-2%) of the composition, the emulsifier is present preferably from about. . . weight of the composition.
The composition is preferably a stable emulsion and is at least substantially free of a conventional surfactant.
The **terpene** is preferably limonene.
The alcohol amine is preferably selected from monoethanolamine and triethanolamine.

The copper complex comprises the reaction product of **copper carbonate** and a chelating agent in an aqueous environment.
Water is preferably present from about 3-50% by weight.
Preferred Complex: The copper complex. . . by weight of the complete composition of water, from about 5-60% chelating agent and from about 2-22% by weight of **copper carbonate**.
The **terpene** is present in an amount effective to function as a wetting agent.
Preferred Emulsifier: The emulsifier is preferably made up. . .

L33 ANSWER 4 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1996-094434 [10] WPIDS
DNC C1996-030368
TI Coating material compsn. used as marine antifouling paint - comprises terpene phenol deriv..
DC A82 C03 E14 F06 G02
PA (NIOF) NIPPON OILS & FATS CO LTD; (NITP) NIPPON TERPENE KAGAKU KK
CYC 1
PI JP 08003485 A 19960109 (199610)* 8p
ADT JP 08003485 A JP 1994-155477 19940615
PRAI JP 1994-155477 19940615
AB JP 08003485 A UPAB: 19960308
Compsn. comprises at least **terpene** phenol deriv. having a residue of phenols and residue of **terpenes** in the same molecule.
USE - The coating material compsn. is used as antifouling paint for preventing aquatic organisms from adhering to fishnets used in fish farms and fixed shore net fishing, underwater structures and the bottoms of ships.
ADVANTAGE - The coating material compsn. is a low-pollution compsn., and has good adhesive property to undercoating paint. The surface of the coat is smooth.
In an example, a **terpene** phenol deriv. (A-1) was prepd. by reaction of 80 pts.wt. phenol with 2.5 pts.wt. terra alba and 66 pts.wt. camphene at 120 deg.C for 10 hrs., and then, by distilling and purifying the crude oil obtd. by removal of catalyst. A coating material compsn. as ship-bottom paint was prepd. by mixing 5 pts.wt. of (A-1) with 25 pts.wt. rosin WW (60%-soln. in xylene) (vehicle resin), 40 pts.wt. **cuprous oxide** (pigment), 3 pts.wt. polyamide wax (20%-soln. in xylene) (additive), 20 pts.wt. xylene (solvent) and 7 pts.wt. methyl isobutyl ketone (solvent), and by dispersing with a dispersing machine using glass beads.
After prepn. of test pieces by applying the ship-bottom paint to steel plates coated with anticorrosive paint to obtain 60-80 micron dried thickness, antifouling test was made by dipping the test pieces at a depth of 2m in the sea for 24 months. No marine organism adhering to the test pieces was observed after 24 months.
Dwg.0/0
AB JP 08003485 UPAB: 19960308
Compsn. comprises at least **terpene** phenol deriv. having a residue of phenols and residue of **terpenes** in the same molecule.
USE - The coating material compsn. is used as antifouling paint for preventing aquatic organisms from. . . compsn., and has good adhesive property to undercoating paint. The surface of the coat is smooth.
In an example, a **terpene** phenol deriv. (A-1) was prepd. by reaction of 80 pts.wt. phenol with 2.5 pts.wt. terra alba and 66 pts.wt. camphene. . . was prepd. by mixing 5 pts.wt. of (A-1) with 25 pts.wt. rosin WW (60%-soln. in xylene) (vehicle resin), 40 pts.wt. **cuprous oxide** (pigment), 3 pts.wt. polyamide wax (20%-soln. in xylene) (additive), 20 pts.wt. xylene (solvent) and 7 pts.wt. methyl isobutyl ketone (solvent),. . .

L33 ANSWER 5 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1994-104379 [13] WPIDS

DNN N1994-081599 DNC C1994-048091
TI Conductor for conductive circuit of e.g. multilayer substrate - consists of silver - copper conductor having silver concn. increasing towards conductor surface, providing firm soldering to lead wire etc..
DC L03 M13 P53 V01 V04 X12
PA (ASAH) ASAHI CHEM IND CO LTD
CYC 1
PI JP 06052721 A 19940225 (199413)* 7p
ADT JP 06052721 A JP 1992-204709 19920731
PRAI JP 1992-204709 19920731
AB JP 06052721 A UPAB: 19940517
Conductor comprises conductor of formula, AgxCu1-x, where x is 0.001-0.4 in atomic ratio, which is formed on a ceramics substrate. Ag concn. in the surface of the conductor shall be higher than average Ag concn., and also Ag concn. shall increase towards the surface of the conductor.

Pref. porosity of the conductor shall be 0.1-30 mol.%. Ag concn. in the surface of the conductor shall be at least 2.1 times as much as average Ag concn.

USE/ADVANTAGE - Conductor is used for conductive circuit for the multilayered substrate, through-hole conductor, terminal electrode of ruthenium resistor. Firm soldering can be achieved in attaching lead wire or fine lines.

In an example, paste, consisting of 10 g of conductive powder of 10 microns in particle size, of which Ag concn. in the surface is 0.8 atm. ratio, average Ag concn. is 0.1 atomic ratio, average Cu concn. is 0.9 atomic ratio, 0.2 g of glass frit of PbO-B2O3-ZnO, 0.02 g of ethyl cellulose, 0.2 g of **terpenol**, and 0.1 g of **cuprous oxide**, was screen-printed on an alumina substrate to form circuit on it, then sintered at 900 deg. C for 10 minutes in N2 atmos. 600 ppm of oxygen was doped up to 550 deg. C.

Dwg.0/0

AB . . .
concn. is 0.9 atomic ratio, 0.2 g of glass frit of PbO-B2O3-ZnO, 0.02 g of ethyl cellulose, 0.2 g of **terpenol**, and 0.1 g of **cuprous oxide**, was screen-printed on an alumina substrate to form circuit on it, then sintered at 900 deg. C for 10 minutes. . .

L33 ANSWER 6 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1993-252897 [32] WPIDS
DNC C1993-112534
TI Decontaminating resin compsn. preventing adhesion of giving organism e.g. shellfish to ships etc. - comprises EVA copolymer, copper oxide and opt. a tackifying resin e.g. alkylphenol resin providing good processability etc..
DC A18 A60 G02 H08 M13
PA (MITB) MITSUI ENG & SHIPBUILDING CO; (TOYJ) TOSOH CORP
CYC 1
PI JP 05170983 A 19930709 (199332)* 5p
ADT JP 05170983 A JP 1991-340980 19911224
PRAI JP 1991-340980 19911224
AB JP 05170983 A UPAB: 19931122
Compsn. comprises (a) 100 pts.wt. of ethylene-vinyl acetate copolymer contg. 10-50 wt.% of vinyl acetate; and (b) 130-800 pts.wt. of **copper oxide**; and opt. (c) 10-150 pts.wt. of tackifying resin. (c) Is alkylphenol resin, **terpene** resin, petroleum resin, coumaroneindene resin, styrene-type resin, rosin etc..

USE/ADVANTAGE - Compsn. is used as decotaminating resin compsn. against adheison of living thing in the sea such as shellfish, seaweed, microorganism, or industrial material or construction in the sea and ship, pipe laid in the sea etc.. Compsn. shows good processability, high mechanical strength and good adhesivity.

Dwg.0/0

AB . . .

Compsn. comprises (a) 100 pts.wt. of ethylene-vinyl acetate copolymer contg. 10-50 wt.% of vinyl acetate; and (b) 130-800 pts.wt. of **copper oxide**; and opt. (c) 10-150 pts.wt. of tackifying resin. (c) Is alkylphenol resin, **terpene** resin, petroleum resin, coumaroneindene resin, styrene-type resin, rosin etc..

USE/ADVANTAGE - Compsn. is used as decotaminating resin compsn. against adheison. . .

L33 ANSWER 7 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1992-409000 [50] WPIDS
DNC C1992-181398
TI Self-emulsifiable fungicidal compsns. - contain copper tallate and terpenic alcohol(s) and hydrocarbon(s).
DC C01 C03
IN DUBEARNES, R; DUFAU, G; LAUILHE, J
PA (DERI-N) DERIVES RESINIQUES & TERPENIQUES
CYC 8
PI EP 517569 A1 19921209 (199250)* FR 7p
R: AT CH DE ES FR IT LI PT
FR 2677222 A1 19921211 (199306) 127p
ADT EP 517569 A1 EP 1992-401466 19920527; FR 2677222 A1 FR 1991-6753 19910604
PRAI FR 1991-6753 19910604
AB EP 517569 A UPAB: 19931116
Fungicidal compsns. comprise a copper tallate (I), a **terpenic** solvent (II) contg. **terpenic** alcohols and having a b.pt. between 150 and 220 deg.C and opt. one or more emulsifiers.

The tall oil acids from which (I) is prepd. pref. comprise 20-80% resinic acids (esp. 30-55%) the remainder being oleic, linoleic etc. acids. The solvent (II) is a mixt. of **terpenic** alcohols and hydrocarbons, pref. at least 50% being alcohols. The proportions of the various components in the compsn. are 40-80% (I), 15-50% (II) and 5-15% emulsifiers. The compsns. are prepd. by reacting **copper oxide** or hydroxide with a mixt. of resinic acids and fatty acids in a **terpenic** solvent at 120-160 deg.C, in the presence of a 1-6C acid as catalyst.

USE/ADVANTAGE - Treatment of plants esp. vines and cellulosic materials to prevent fungal attack. The compsns. are self-emulsifiable and show far less phytotoxicity than known copper tallate compsns. Dwg.0/0

AB EP 517569 UPAB: 19931116
Fungicidal compsns. comprise a copper tallate (I), a **terpenic** solvent (II) contg. **terpenic** alcohols and having a b.pt. between 150 and 220 deg.C and opt. one or more emulsifiers.

The tall oil acids. . . comprise 20-80% resinic acids (esp. 30-55%) the remainder being oleic, linoleic etc. acids. The solvent (II) is a mixt. of **terpenic** alcohols and hydrocarbons, pref. at least 50% being alcohols. The proportions of the various components in the compsn. are 40-80% (I), 15-50% (II) and 5-15% emulsifiers. The compsns. are prepd. by reacting **copper oxide** or hydroxide with a mixt. of resinic acids and fatty acids in a **terpenic** solvent at 120-160 deg.C, in the presence of a 1-6C acid as catalyst.

USE/ADVANTAGE - Treatment of plants esp. vines. . .

L33 ANSWER 8 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1991-365136 [50] WPIDS
DNC C1991-157381
TI Aquatic life-repellent paint, for ship hulls, etc. - comprises terpenoid aquatic organism repellent and vinyl oligomer to prolong repellent effect, for fishing nets, etc..
DC A82 C03 E15 G02
PA (SHOX) SHOWA ELECTRIC WIRE CO LTD
CYC 1
PI JP 03244673 A 19911031 (199150)*

ADT JP 03244673 A JP 1990-42222 19900222
PRAI JP 1990-42222 19900222
AB JP 03244673 A UPAB: 19930928
Aquatic life repellent paint comprises **terpenoid** life repellent as effective ingredient.

USE/ADVANTAGE- Provides aquatic life repellent paint with prolonged harmful aquatic life adhesion prevention without toxicity to human being or environmental pollution useful for preventing ship hull, fishing nets and drainpipes of nuclear power stations and chemical plants from adhesion of aquatic life eg barnacles, mussels, seaweeds and ascidians. Mixing oligomer of **terpenoid** also prolongs repellent effect.

In an example, 100 pts by wt. of vinyl paint comprising 18wt.% of PVC.ethylene-vinyl acetate graft copolymer paint with ethylene-vinyl acetate of 30% and solid of 60%, 24 wt.% of rosin soln. with solid of 60%, 35wt.% of **cuprous oxide**, 13wt.% of red oxide and 10wt.% of solvent naphtha, 0.5 pt of alloocimene, 0.1 pt of alpha terpineol, 1 part of alpha-limonene, 1 pt of sesquiterpene and 3 pts of alloocimene dimer were stirred at room temp. to give aquatic life repellent-paint.

91157381

AB JP 03244673 UPAB: 19930928
Aquatic life repellent paint comprises **terpenoid** life repellent as effective ingredient.

USE/ADVANTAGE- Provides aquatic life repellent paint with prolonged harmful aquatic life adhesion prevention without. . . nuclear power stations and chemical plants from adhesion of aquatic life eg barnacles, mussels, seaweeds and ascidians. Mixing oligomer of **terpenoid** also prolongs repellent effect.

In an example, 100 pts by wt. of vinyl paint comprising 18wt.% of PVC.ethylene-vinyl acetate. . . with ethylene-vinyl acetate of 30% and solid of 60%, 24 wt.% of rosin soln. with solid of 60%, 35wt.% of **cuprous oxide**, 13wt.% of red oxide and 10wt.% of solvent naphtha, 0.5 pt of alloocimene, 0.1 pt of alpha terpineol, 1 part. . .

L33 ANSWER 9 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1990-096022 [13] WPIDS
DNC C1990-042376
TI Limonen-4-ol or terpinen-4-ol prepn. - comprises hydrogenation and/or isomerisation of terpinolene-4,8-epoxide in presence of copper catalyst.
DC D23 E15
PA (YASU-N) YASUHARA YUSHI KOGY
CYC 1
PI JP 02048541 A 19900219 (199013)* 8p
JP 2585737 B2 19970226 (199713) 7p
ADT JP 02048541 A JP 1988-197997 19880810; JP 2585737 B2 JP 1988-197997 19880810
FDT JP 2585737 B2 Previous Publ. JP 02048541
PRAI JP 1988-197997 19880810
AB JP 02048541 A UPAB: 19930928
Preparation of **terpene** alcohol(s) (I) comprises isomerisation and/or hydrogenation of terpinolene-4, 8-epoxide (II) in presence of copper catalyst (III).

Pref. raney-copper (IIIa), (supported) **copper oxide** (s) catalyst(s) (IIIb) or (supported) **copper oxide** (s)-chromium oxide(s) and/or zinc oxide catalyst (IIIc) is used. In (IIIc), ratio of copper/ chromium and/or zinc is 95/5-10/90 (pref. 80/20-30/70 w.w), and catalytic ingredient/carrier is 80/20-30/70 in (IIIb) and (IIIc).

In batchwise operation, (II) and 0.05-50wt.% (pref. 0.1-30 wt. %, opt. 0.2-20wt.%) (III) are charged to reactor, the mixt. is heated to 70-230deg.C(pref. 90-190deg.C) under inert gas or hydrogen atmos. Heating the mixt. under inert gas atmos. or 0.2-7kg/sq.cm hydrogen atmos., (Ia) is obtd. as major prod. heating the mixt. under 10kg/cm or more pressured

hydrogen atmosphere, (Ib) is obtd. as major prod. Isomerisation and/or hydrogenation of (II) can be carried out by usual continuous process.

USE/ADVANTAGE - (I) esp. limonen-4-ol(Ia) and/or terpinen-4-ol (Ib), is used as artificial perfume or intermediate of (artificial) perfume. (I) is prepd. by one step reaction in high and steady yield by using (modified) (III).

0/0

AB JP 02048541 UPAB: 19930928

Preparation of **terpene** alcohol(s) (I) comprises isomerisation and/or hydrogenation of terpinolene-4, 8-epoxide (II) in presence of copper catalyst (III).

Pref. raney-copper (IIIa), (supported) **copper oxide** (s) catalyst(s) (IIIb) or (supported) **copper oxide** (s)-chromium oxide(s) and/or zinc oxide catalyst (IIIc) is used. In (IIIc), ratio of copper/ chromium and/or zinc is 95/5-10/90 (pref. 80/20-30/70. . .

L33 ANSWER 10 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1988-316585 [45] WPIDS
CR 1989-047909 [07]
DNN N1988-240055 DNC C1988-139871
TI Superconductive ceramic oxide coatings on substrates - has thermally unstable metal salts applied in soln. and decomposed.
DC L03 P42 P73 U14 X12
IN AGOSTINELL, J A; HIGHBERG, B J; MIR, J M; PAZPUJALT, G R; PETERSON, D L; RAJESEWARA, G; AGOSTINELLI, J A; PAZ-PUJALT, G R; RAJESWARAN, G
PA (EAST) EASTMAN KODAK CO
CYC 12
PI EP 290357 A 19881109 (198845)* EN 23p
R: BE CH DE ES FR GB LI NL SE
AU 8815594 A 19881110 (198910)
JP 01027125 A 19890130 (198910)
US 4880770 A 19891114 (199004) 23p
US 5070072 A 19911203 (199151)
EP 290357 B1 19930901 (199335) EN 27p
R: DE FR GB
DE 3883594 G 19931007 (199341)
ADT EP 290357 A EP 1988-420141 19880502; JP 01027125 A JP 1988-109267 19880506; US 4880770 A US 1987-46593 19870504; US 5070072 A US 1989-329049 19890327; EP 290357 B1 EP 1988-420141 19880502; DE 3883594 G DE 1988-3883594 19880502, EP 1988-420141 19880502
FDT DE 3883594 G Based on EP 290357
PRAI US 1987-46593 19870504
AB EP 290357 A UPAB: 19931119

A superconducting article comprises a flexible electrically-conductive layer of crystalline lanthanide-alkaline earth-copper oxide defining a conduction path or forming a conductive sheath on an elongated metal or oxide substrate. The conductive layer has a thickness of 2 microns or less and the substrate surface contacting the conductor may be a refractory metal. The substrate may be of alumina, and alkaline earth oxide or SrTiO3, may be monocrystalline and exhibit a perovskite or tetragonal K2NiF4 structure. A barrier may be interposed between the substrate and conductive layer.

Also claimed is that the superconducting transition is at least 30 or at least 80K and that the conductive layer consists of greater than 45-90 vol.% of crystalline conductive phase. Further claimed is a variety of specific lanthanide-alkaline-earth-copper oxide compositions such as La1.7Ba0.3Cu. Also claimed is a process of applying a soln. of thermally-unstable metal compounds such as acetates, in a solvent onto the substrate, and heating in oxygen to form amorphous oxides, which are then crystallised by further heating, which may be by electromagnetic radiation, e.g. from a laser.

USE/ADVANTAGE - In the prior art superconducting ceramic oxides have

been formed by grinding and sintering methods with accompanying disadvantages, and the difficulty of wire formation. The new invention avoids these difficulties by using soluble precursors which can be coated onto a substrate of any shape including wires. Also conducting patterns may be formed with minimum heating.
Dwg.0/8

ABEQ. . .
film-forming solvent; an organic film-promoting agent selected from 2-ethyl hexanoic acid, resin, ethyl lactate, 2-ethoxy ethyl acetate and a 10-30C **terpene**; metal-ligand cpds. of each of rare earth and alkaline earth contg. at least one thermally volatilisable organic ligand; and at. . . then removed from the substrate by heating, in the presence of oxygen, to form an amorphous rare earth alkaline earth **copper oxide** coating of less than 1 micron in thickness on the substrate. Finally, a crystalline conductive metal oxide coating is formed. . .

ABEQ. . .
from the substrate, this step including heating in the presence of oxygen to form an amorphous rare earth alkaline earth **copper oxide** coating on the substrate.
Dwg.1/8

L33 ANSWER 11 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1987-323077 [46] WPIDS
DNC C1987-137664
TI Antifouling and anticorrosive coating compsn. - contg. a base vehicle and curing agent and zinc oxide, tri organo tin salt, metal alkylene di thiocarbamate and a cuprous cpd..
DC A21 A82 G02 M14
IN BRAEKEN, J; ROUW, H C; VAN, DER POEL H; VANDERPOEL, H
PA (LABO) FINA RES SA; (LABO) LABOFINA SA
CYC 8
PI GB 2190380 A 19871118 (198746)*
EP 247019 A 19871125 (198747) EN
R: BE DE ES FR GB IT NL SE
GB 2190380 B 19891206 (198949)
EP 247019 B 19920415 (199216) EN 12p
R: BE DE ES FR GB IT NL SE
DE 3778206 G 19920521 (199222)
ES 2032207 T3 19930116 (199307)
ADT GB 2190380 A GB 1986-11623 19860513; EP 247019 A EP 1987-870065 19870508; EP 247019 B EP 1987-870065 19870508; DE 3778206 G DE 1987-3778206 19870508, EP 1987-870065 19870508; ES 2032207 T3 EP 1987-870065 19870508
FDT DE 3778206 G Based on EP 247019; ES 2032207 T3 Based on EP 247019
PRAI GB 1986-11623 19860513
AB GB 2190380 A UPAB: 19930922
Compsn. comprises (a) a base vehicle (I) formed from an epoxy resin and a substance selected from aromatic pitch-contg. materials and thermoplastic hydrocarbon resins, (b) a curing agent (II) for the epoxy resin and (c) a mixt. of antifouling biocides (III) comprising ZnO, a triorganotin salt, a metallic salt of an alkylene dithiocarbamic acid and a cuprous cpd. selected from **cuprous oxide** and cuprous thiocyanate, the amt. of cuprous cpd. being no greater than 7% by vol.

The compsn. pref. contains 40-78 vol.% (I) and 22-60 vol.% (III). Pref. (II) is used in an amt. of 0.05-1 pt. wt. per pt. of epoxy resin. Suitable pitch-contg. materials are coal tar, coal tar pitch, polydiene resine, coumarone-indene resins, **terpene** phenolic resins, styrene acrylonitrile indene terpolymers and low mol. wt. polystyrenes. The biocides pref. comprise (a) R3SnA or (R3Sn)2B (R=1-8C alkyl; A=halogen or monovalent carboxylic acid gp.; B=O, S or divalent carboxylic acid gp.); (E=ethylene, propylene or butylene; M=Zn; Ni; Mn, Cu, Co, Pb, Fe, Sn or Hg; m=1, Z=2 when M is monovalent, m=1, z=1 when M is divalent, m=3, z=2 when M is trivalent; m=2, z=1 when M is tetravalent); (c) 0-25 vol.% ZnO and (d) 0.5-5 vol.% **cuprous oxide**.

USE/ADVANTAGE - for ship bottoms and for metallic structures which are exposed to sea water. The total amt. of bioxide may be decreased compared to US3801534 without impairing the antifouling properties and the compsns. are more stable over, and have improved antifouling properties relative to those in the prior art. The compsn. is stable upon prolonged storage and gives the same protection against corrosion and fouling with less coats. It has an additional service life of more than 5 months over traditional long life antifouling paints.
0/0

AB . . .
(III) comprising ZnO, a triorganotin salt, a metallic salt of an alkylene dithiocarbamic acid and a cuprous cpd. selected from **cuprous oxide** and cuprous thiocyanate, the amt. of cuprous cpd. being no greater than 7% by vol.
The compsn. pref. contains. . . pt. wt. per pt. of epoxy resin. Suitable pitch-contg. materials are coal tar, coal tar pitch, polydiene resine, coumarone-indene resins, **terpene** phenolic resins, styrene acrylonitrile indene terpolymers and low mol. wt. polystyrenes. The biocides pref. comprise (a) R3SnA or (R3Sn)2B (R=1-8C. . . m=3, z=2 when M is trivalent; m=2, z=1 when M is tetravalent); (c) 0-25 vol.% ZnO and (d) 0.5-5 vol.% **cuprous oxide**.
USE/ADVANTAGE - for ship bottoms and for metallic structures which are exposed to sea water. The total amt. of. . .

ABEQ. . .
(III) comprising ZnO, a triorganotin salt, a metallic salt of an alkylene dithiocarbamic acid and a cuprous cpd. selected from **cuprous oxide** and cuprous thiocyanate, the amt. of cuprous cpd. being no greater than 7% by vol.
The compsn. pref. contains. . . pt. wt. per pt. of epoxy resin. Suitable pitch-contg. materials are coal tar, coal tar pitch, polyidene resine, coumarone-indene resins, **terpene** phenolic resins, styrene acrylonitrile indene terpolymers and low mol. wt. polystyrenes. The biocides pref. comprise (a) R3SnA or (R3Sn)2B (R=1-8C. . . m=3, z=2 when M is trivalent; m=2, z=1 when M is tetravalent); (c) 0-25 vol.% ZnO and (d) 0.5-5 vol.% **cuprous oxide**.
USE/ADVANTAG - for ship bottoms and for metallic structures which are exposed to sea water. The total amt. of. . .

ABEQ. . .
is tetravalent; c) zinc oxide which is present in an amt. of upto 25% by volume of said compsn.; d) **cuprous oxide** which is present in an amt. of from 0.5 to 5% by volume of said compsn.. ()

ABEQ. . .
(III) comprising ZnO, a triorganotin salt, a metallic salt of an alkylene dithiocarbamic acid and a cuprous cpd. selected from **cuprous oxide** and cuprous thiocyanate, the amt. of cuprous cpd. being no greater than 7% by vol.
The compsn. pref. contains. . . pt. wt. per pt. of epoxy resin. Suitable pitch-contg. materials are coal tar, coal tar pitch, polydiene resine, coumarone-indene resins, **terpene** phenolic resins, styrene acrylonitrile indene terpolymers and low mol. wt. polystyrenes. The biocides pref. comprise (a) R3SnA or (R3Sn)2B (R=1-8C. . . m=3, z=2 when M is trivalent; m=2, z=1 when M is tetravalent); (c) 0-25 vol.% ZnO and (d) 0.5-5 vol.% **cuprous oxide**.
USE/ADVANTAGE - for ship bottoms and for metallic structures which are exposed to sea water. The total amt. of. . .

L33 ANSWER 12 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1983-52111K [22] WPIDS
DNN N1983-093826 DNC C1983-050684
TI Potentially resistive or conductive inks using cuprous oxide - for the production of thick film hybrid electronic circuits.
DC A85 L03 P42 U11 U14 X12
IN CASSAT, R

PA (RHON) RHONE POULENC SPECIALITES CHIM
CYC 9
PI EP 79845 A 19830525 (198322)* FR 26p
R: BE DE GB IT NL SE
FR 2516739 A 19830520 (198325)
JP 58165365 A 19830930 (198345)
US 4517227 A 19850514 (198522)
EP 79845 B 19860319 (198612) FR
R: BE DE GB IT NL SE
DE 3270016 G 19860424 (198618)
US 4756756 A 19880712 (198830)
JP 63061798 B 19881130 (198851)
ADT EP 79845 A EP 1982-420152 19821109; JP 58165365 A JP 1982-200501 19821117; US 4517227 A US 1982-441153 19821112; US 4756756 A US 1985-705726 19850226
PRAI FR 1981-21642 19811117
AB EP 79845 A UPAB: 19930925
The procedure consists of printing the desired circuits onto an insulating substrate using screen printing techniques followed by baking with the operations of sprinting and baking being repeated as many times as necessary.

The ink used is insulating, containing a non-conducting oxide derived from a non-noble metal, which has the ability to be potentially resistive or conductive depending upon the composition pref. containing **cuprous oxide** with a binder of polymeric material such as phenolic resins, unsaturated polyester resins, epoxy resins and polyamide resins and a dilutant of ether alcohols, glycols or **terpenic** alcohols.

After deposition and baking the ink is subjected to reduction using an alkaline borohydrate to develop the required resistive or conducting portions.

Potentially resistive or conductive inks for use in the preparation of thick film hybrid circuits. It gives an economic and technically simple method of obtaining planar layers suitable for the deposition of further layers.

AB . . .
from a non-noble metal, which has the ability to be potentially resistive or conductive depending upon the composition pref. containing **cuprous oxide** with a binder of polymeric material such as phenolic resins, unsaturated polyester resins, epoxy resins and polyamide resins and a dilutant of ether alcohols, glycols or **terpenic** alcohols.

After deposition and baking the ink is subjected to reduction using an alkaline borohydrate to develop the required. . .

L33 ANSWER 13 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1980-40329C [23] WPIDS
TI Coating compsns. for copper - comprising basic copper salts, film-forming agent and solvent.
DC A14 A28 A82 G02 M13
PA (DOWA-N) DOWA KINZOKU KAIHATSU CE; (DOWA) DOWA MINING CO LTD; (JAPS) JAPAN SYNTHETIC RUBBER CO LTD
CYC 1
PI JP 55054361 A 19800421 (198023)*
PRAI JP 1978-127313 19781018
AB JP 55054361 A UPAB: 19930902
At least one cpd. selected from basic **copper carbonate**, basic copper acetate, basic copper sulphate and basic copper chloride is used as a pigment in paint compsns. comprising a film forming material (e.g. dry oils, phthalic acid/glycerine resin, vinyl acetate/acrylate copolymer, PVC, polyvinylbutyral, alkyd resin, epoxy resin, polyurethane) and a solvent (e.g. ethanol, toluene, ethyl acetate, butyl acetate, methylisobutyl ketone, xylol, **terpene** oil, solvent naphtha, mineral spirit).

In an example, polyvinyl butyral (20 pts.) was dissolved in ethanol (30 pts.) to provide a vehicle. The vehicle was mixed with powdery basic copper sulphate (50 pts.) to provide a paint. The paint was coated on degreased copper plate in a thickness of about 60 mu and dried for 2 hr. to provide appearance similar to naturally occurring verdigris.

The paint compsns. afford an appearance similar to natural verdigris.

AB JP 55054361 UPAB: 19930902
At least one cpd. selected from basic **copper carbonate**, basic copper acetate, basic copper sulphate and basic copper chloride is used as a pigment in paint compsns. comprising a. . . . PVC, polyvinylbutyral, alkyd resin, epoxy resin, polyurethane) and a solvent (e.g. ethanol, toluene, ethyl acetate, butyl acetate, methylisobutyl ketone, xylol, **terpene** oil, solvent naphtha, mineral spirit).

In an example, polyvinyl butyral (20 pts.) was dissolved in ethanol (30 pts.) to. . .

L33 ANSWER 14 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1979-61897B [34] WPIDS
TI Antifouling paints contg. cuprous oxide - in a binder contg. a nonionic surfactant.
DC A82 E32 G02
IN FOURTY, G; HENRIOUX, J
PA (NAOC-N) CENT NAT EXPL OCE
CYC 1
PI FR 2408640 A 19790713 (197934)*
PRAI FR 1977-34264 19771115
AB FR 2408640 A UPAB: 19930901
Antifouling paint containing a suspension of **cuprous oxide** in a mixt. a water insoluble film-forming binder, >=1 substance soluble in sea water and a solvent for both the insoluble binder and the water soluble substance, this water-soluble substance being, at elast partially, a nonionic surfactant.

The surfactant is typically an alkyl polyethylene glycol an alkaryl polyethylene glycol, an acyl polyethylene glycol or an oxyethyl propylene glycol. The water-soluble material si pref. a mixt. of the surfactant with rosin. The solvent may be an aliphatic, aromatic or **terpenic** hydrocarbon, an alcohol or polyalcohol an ester, ketone or a mixt. of these. Usually the paint contains 25-70% cu2O.

The paint liberates the **cuprous oxide** more slowly and evenly than conventional paints based on **cuprous oxide**.

AB FR 2408640 UPAB: 19930901
Antifouling paint containing a suspension of **cuprous oxide** in a mixt. a water insoluble film-forming binder, >=1 substance soluble in sea water and a solvent for both the. . . The water-soluble material si pref. a mixt. of the surfactant with rosin. The solvent may be an aliphatic, aromatic or **terpenic** hydrocarbon, an alcohol or polyalcohol an ester, ketone or a mixt. of these. Usually the paint contains 25-70% cu2O.

The paint liberates the **cuprous oxide** more slowly and evenly than conventional paints based on **cuprous oxide**.

L33 ANSWER 15 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1979-46475B [25] WPIDS
TI Cyclic terpene ester(s) prepn. for use as perfumes - by heating cyclic terpene-allyl alcohol(s) contg. exo double bond in organic acid, using copper cpd. as catalyst.
DC D23 E15
PA (TPER) TAIYO KORYO KK
CYC 1
PI JP 54059254 A 19790512 (197925)*
JP 57055702 B 19821125 (198251)

PRAI JP 1977-123552 19771017
AB JP 54059254 A UPAB: 19930901
Method comprises heating cyclic **terpeneallyl** alcohols having exo double bond in organic acid in the presence of a Cu cpd. catalyst to effect esterification and isomerisation simultaneously. As the starting cyclic **terpene**-allyl alcohol pinocarveol and isocarveol can be used.

The cyclic **terpene** esters obtd. are useful as perfume or intermediates for perfumes. From pinocarveol and isocarveol, myrtenyl esters and perillyl esters can be obtd. respectively.

As the Cu cpd. catalyst **cuprous oxide**, **cupric oxide**, copper acetate, copper chloride, copper sulphate or cupric propionate can be used, pref. in an amt. of 1-20 (esp. 5-10) wt.% based on starting cyclic **terpene**-allyl alcohols. As the organic acid solvent, formic, acetic, propionic, butyric or valeric acid can be used and the kind of ester obtd. is determined by the kind of organic acid used. Specifically, the reaction is effected at 100-200 (esp. 120-170) degrees C in organic acid solvent.

AB JP 54059254 UPAB: 19930901
Method comprises heating cyclic **terpeneallyl** alcohols having exo double bond in organic acid in the presence of a Cu cpd. catalyst to effect esterification and isomerisation simultaneously. As the starting cyclic **terpene**-allyl alcohol pinocarveol and isocarveol can be used.

The cyclic **terpene** esters obtd. are useful as perfume or intermediates for perfumes. From pinocarveol and isocarveol, myrtenyl esters and perillyl esters can be obtd. respectively.

As the Cu cpd. catalyst **cuprous oxide**, **cupric oxide**, copper acetate, copper chloride, copper sulphate or cupric propionate can be used, pref. in an amt. of 1-20 (esp. 5-10) wt.% based on starting cyclic **terpene**-allyl alcohols. As the organic acid solvent, formic, acetic, propionic, butyric or valeric acid can be used and the kind of. . .

L33 ANSWER 16 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1979-46474B [25] WPIDS
TI Cyclic terpene ester cpds. prepn. - by isomerising cyclic terpene allyl ester cpds. in organic solvent using copper cpd. catalyst.
DC D23 E15
PA (TPER) TAIYO KORYO KK
CYC 1
PI JP 54059253 A 19790512 (197925)*
JP 57055701 B 19821125 (198251)
PRAI JP 1977-123551 19771017
AB JP 54059253 A UPAB: 19930901
The method comprises heating cyclic **terpeneallylesters**, having exo double bonds, in an organic solvent and a copper cpd. catalyst to isomerise them. Pref. starting cpd. is pinocarveol ester (I) or isocarveyl ester (II). (where R is 1-4C alkyl).

The prods. are useful as (intermediates for) perfume cpds. and can be easily prepd. Cpds. (I) and (II) give myrtenylesters and perillylesters respectively.

Pref. catalyst is **cuprous oxide**, **cupric oxide**, copper chloride, copper acetate, copper sulphate or cupric propionate in an amt. of 1-20, pref. 5-10 w/w% of starting cpd.; the solvent is 1-5C organic acid, formic acid, acetic acid, propionic acid, butyric acid or valeric acid; and the isomerisation at 100-200, pref. 120-170 degrees C.

AB JP 54059253 UPAB: 19930901
The method comprises heating cyclic **terpeneallylesters**, having exo double bonds, in an organic solvent and a copper cpd. catalyst to isomerise them. Pref. starting cpd. is. . . perfume cpds. and can be easily prepd. Cpds. (I) and (II) give myrtenylesters and perillylesters

respectively.
Pref. catalyst is **cuprous oxide, cupric oxide**, copper chloride, copper acetate, copper sulphate or cupric propionate in an amt. of 1-20, pref. 5-10 w/w% of starting cpd.;. . .

L33 ANSWER 17 OF 23 WPIDS (C) 2002 THOMSON DERWENT
AN 1978-82984A [46] WPIDS
TI Acyclic terpene diol cpds. prodn. - by reducing hydroxylamine cpd. with hydrogen in the presence of iron gp. metal, copper or an oxide of these.
DC D23 E17
PA (NISC) NISSAN CHEM IND LTD
CYC 1
PI JP 53116311 A 19781011 (197846)*
JP 60054293 B 19851129 (198601)
PRAI JP 1977-31305 19770322
AB JP 53116311 A UPAB: 19930901
Prepn. of acyclic terepenediols, partic. hydroxygeraniol, hydroxynerol or hydroxycitronellol, comprises reducing a hydroxylamine cpd. of formula (I), pref. O-(3,7-dimethyl-7-hydroxy-2-octene)-N,N-dialkylhydroxylamines, with H2 in the presence of >=1 of iron group metals, copper and oxides of these metals and a copper chromite catalyst, partic. Raney Ni, Raney Fe, Raney Cu, reduced Ni, reduced Fe or reduced Cu. In (I) R1 and R2 each are H or lower alkyl; R3 is alkyl.
The O-(3,7-dimethyl-7-hydroxy-2-octene)-N,N-dialkylhydroxyalmines are prepd. from 3,7-dimethyl-7-hydroxy-2-octenylamine. The 3,7-dimethyl-7-hydroxy-2-octenylamine is prepd. by reacting isoprene and a dialkylamine in the presence of lithium and then subjecting the reaction prod. to water-addition reaction.
The -O-N- linkage of (I) is cleaved by reduction with H2 while inhibiting hydrogenation of the unsatd. bond without being accompanied by shift of the double bond in the unsatd. acyclic hydrocarbon skeleton. Reduction is pref. in a solvent.
TT TT: ACYCLIC **TERPENE** DIOL COMPOUND PRODUCE REDUCE HYDROXYLAMINE COMPOUND HYDROGEN PRESENCE IRON GROUP METAL **COPPER OXIDE**.
AW: HYDROXY GERANIOL NEROL CITRONELLOL.

L33 ANSWER 18 OF 23 CABA COPYRIGHT 2002 CABI
AN 82:137987 CABA
DN 822338159
TI Alachlor influence on sorghum growth and gibberellin precursor synthesis
AU Wilkinson, R. E.
CS Dep. Agron., Georgia Sta., Experiment, GA 30212, USA.
SO Pesticide Biochemistry and Physiology, (1982) Vol. 17, No. 2, pp. 177-184. 40 ref.
ISSN: 0048-3575
DT Journal
LA English
AB Growth (14 days) of sorghum cv G522 DR from seed sown in sand, into which alachlor was uniformly incorporated at 0.07-4.48 kg/ha, was reduced by 0.14 kg/ha and severely (88%) inhibited by 0.56 kg/ha while cellular water content was not greatly influenced by 0.56 kg/ha. When added to the nutrient solution bathing the roots of 96-h sorghum seedlings, alachlor at 0.0156-128 p.p.m.w. was not lethal to 14-day-old sorghum at rates up to 32 p.p.m.w. (92% survival); however, shoot and root lengths were reduced 43 and 58%, respectively. Alachlor inhibition of sorghum growth appears to be closely associated with inhibition of cell enlargement; the coleoptile is the most susceptible stage of sorghum growth to alachlor. This situation closely resembles growth where GA synthesis is inhibited.
[2-14C-]Mevalonic acid (MVA) incorporation into **terpenoid** GA precursors was evaluated using a cell-free enzyme system from etiolated sorghum coleoptiles. Alachlor did not inhibit total 14C incorporation but incorporation of 14C into kaurenol and sterols was decreased approx. 80

and 75%, respectively, by 10-6M alachlor. Analyses for [14C-]geranylgeraniol (**GG**), [14C-]farnesol, and [14C-]geraniol contents showed accumulation of [14C-]farnesol and [14C-]**GG**, and decreased [14C-]geraniol. When seeds to which CGA-43 089 (cyometrinil) was applied 8 wks prior to sowing were substituted for untreated seeds, incorporation of [2-14C-]MVA into [14C-]kaurenol was increased by alachlor while [14C-]**GG** and [14C-]farnesol accumulated and [14C-]geraniol was absent at 10-6M alachlor. Additionally, sterol content increased in safened systems but was still decreased by alachlor. These data demonstrate multiple sites of alachlor activity in the GA and **terpenoid** biosynthetic pathway.

AB . . . of sorghum growth to alachlor. This situation closely resembles growth where GA synthesis is inhibited. [2-14C-]Mevalonic acid (MVA) incorporation into **terpenoid** GA precursors was evaluated using a cell-free enzyme system from etiolated sorghum coleoptiles. Alachlor did not inhibit total 14C incorporation. . . incorporation of 14C into kaurenol and sterols was decreased approx. 80 and 75%, respectively, by 10-6M alachlor. Analyses for [14C-]geranylgeraniol (**GG**), [14C-]farnesol, and [14C-]geraniol contents showed accumulation of [14C-]farnesol and [14C-]**GG**, and decreased [14C-]geraniol. When seeds to which CGA-43 089 (cyometrinil) was applied 8 wks prior to sowing were substituted for untreated seeds, incorporation of [2-14C-]MVA into [14C-]kaurenol was increased by alachlor while [14C-]**GG** and [14C-]farnesol accumulated and [14C-]geraniol was absent at 10-6M alachlor. Additionally, sterol content increased in safened systems but was still decreased by alachlor. These data demonstrate multiple sites of alachlor activity in the GA and **terpenoid** biosynthetic pathway.

L33 ANSWER 19 OF 23 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 2001-82800 CROPU F G
TI Heliocuivre. A new fungicide for vine mildew.
AU Ardigier R; Dufau G
CS Samabiol
LO Fr.
SO Phytoma Def.Veg. (2001, No. 536, 50-51)
CODEN: PYTOAU
DT Journal
LA French
FA AB; LA; CT; MPC
AB Heliocuivre is a new fungicide containing very fine crystals of **copper hydroxide** (around 0.55 um) combined with a pine **terpene** derivative. The preparation is readily biodegradable. The **terpene** base allows optimal spray application, and the small crystal size allows improved surface contact and release of copper ions. In field trials, Heliocuivre (3 or 4 l/ha) at 8-10 or 12-14 d intervals gave control of leaf and berry mildew (Plasmopara viticola) comparable to that with Bordeaux mixture (15 kg/ha), other **copper hydroxide** preparations or an unspecified standard fungicide. Heliocuivre allows vines to be effectively protected against mildew at reduced rates of copper/ha, throughout the growing period, and is authorized for use in organic cultures. Optimal application times are between budding and veraison.

AB Heliocuivre is a new fungicide containing very fine crystals of **copper hydroxide** (around 0.55 um) combined with a pine **terpene** derivative. The preparation is readily biodegradable. The **terpene** base allows optimal spray application, and the small crystal size allows improved surface contact and release of copper ions. In. . . d intervals gave control of leaf and berry mildew (Plasmopara viticola) comparable to that with Bordeaux mixture (15 kg/ha), other **copper hydroxide** preparations or an unspecified standard fungicide. Heliocuivre allows vines to be effectively protected against mildew at reduced rates of copper/ha,. .
.

CT. . . PREVENTIVE *FT; COMB.ADDITIVE *FT; FORMULATION *FT; CRYSTAL *FT; PLANT-EXTRACT *FT; SIZE *FT; SPRAY *FT; DISPERSAL *FT; FOLIAR *FT; DEPOSITION *FT; **TERPENE *FT**; DOSAGE *FT; RESIDUE-PERSISTENCE *FT; ORGANIC-CULTURE *FT; CROP-GROWTH-STAGE *FT; APPL.TIME *FT; FLAVOR *FT; QUALITY *FT; FERMENTATION *FT; WINE *FT; FRUIT *FT; LEAF *FT; VINEYARD *FT; FR. *FT; ACTION-MECHANISM *FT; APPL.TECHNIQUE *FT; RESIDUE *FT; BEVERAGE *FT; PLANT-PART *FT; AREA-EUROPE *FT; **COPPER-HYDROXIDE *TR; COPPER-HYDROXIDE *DM;** HELIOCUIVRE *TR; HELIOCUIVRE *DM; CU-HYDROX *RN; FUNGICIDES *FT; TR *FT; DM *FT; BORDEAUX-MIXTURE *TR; BORDEAUXM *RN

L33 ANSWER 20 OF 23 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1999-87095 CROPU H G
TI Algicidal composition comprising a terpene, emulsifier and copper complex.
IN Kierkowski D J; Puetz J D; Wei G
PA Laporte-Water-Technol.+Biochem
LO Alpharetta, Ga., USA
PI AU 9886143 A 19990415
AI US 1997-59757 19970923
US 1998-152182 19980914
AU 1998-86143 19980922
DT Patent
LA English
OS WPI: 1999-303153
FA AB; LA; CT
AB An algicidal composition, comprising from about 0.1 to less than about 5% **terpene**, about 1-20% emulsifier, obtained as the reaction product of tall oil fatty acid and an alcohol amine and about 10-99% of a copper complex, is claimed. Two compositions (1) and (2) are described, containing d-limonene (0.5 or 1.0%), tall oil fatty acid (3.0 or 3.5%), an alcohol amine, e.g. ethanolamine (2.5 or 1.5%) and copper complex, e.g. with **copper-carbonate** or Cutrine-Plus (copper-triethanolamine) (94.0%), resp. In algicidal bioassays, a portion of two ponds (2.25 or 0.81 ha; average depths of 0.91 or 1.22 m), with a heavy infestation of Hydrodictyon or resistant Cladophora was treated with (1) at about 23 l/ha.m (to give about 0.25 ppm copper) or 18.39 l/ha.m, resp.; after 3 or 11 days, more than 95% of Hydrodictyon or 99% of the Cladophora, resp.
AB An algicidal composition, comprising from about 0.1 to less than about 5% **terpene**, about 1-20% emulsifier, obtained as the reaction product of tall oil fatty acid and an alcohol amine and about 10-99%. . . tall oil fatty acid (3.0 or 3.5%), an alcohol amine, e.g. ethanolamine (2.5 or 1.5%) and copper complex, e.g. with **copper-carbonate** or Cutrine-Plus (copper-triethanolamine) (94.0%), resp. In algicidal bioassays, a portion of two ponds (2.25 or 0.81 ha; average depths of. . .

L33 ANSWER 21 OF 23 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1995-84978 CROPU L S I F H P
TI Swedish pesticide policies 1972-93: risk reduction and environmental charges.
AU Ekstrom G; Bernson V
LO Solna, Swed.
SO Rev.Environ.Contam.Toxicol. (141, 27-70, 1995) 5 Fig. 11 Tab. 134 Ref. CODEN: RCTOE4
AV The National Chemicals Inspectorate, P.O. Box 1384, 17127 Solna, Sweden.
DT Journal
LA English
FA AB; LA; CT
AB Swedish governmental pesticide policies from 1972 to 1993, concerning environmental hazards, are reviewed. Topics covered include: bans on aerial spraying of pesticides over forests and other non-agricultural

land; risk reduction programs for pesticides, with an aim of 75% reduction in use over 10 yr; banned and severely restricted pesticides (2,4,5-T was banned, while the use of plant growth regulators was prohibited on cereals; major pesticides sold in 1993; restricted use of preservative-treated wood (arsenic, chromium, creosote); nonactive ingredients; registration fees and other pesticide charges; basis for a hazard-related "Green Tax"; Swedish registration status for pesticides on a selection of international blacklists; guideline levels and cutoff criteria for toxic effects and environmental fate parameters applicable to agricultural pesticides.

ABEX. . . captafol, carbofuran, carbon tetrachloride, chlordane, chlordimeform, chloropicrin, chlorpyrifos, chromium compounds (chromium trioxide, sodium dichromate, potassium dichromate), copper and copper compounds (**copper hydroxide**, **copper oxychloride**, **copper** (**II**) **hydroxide** carbamate, copper naphthenate, **cupric oxide**, copper sulfate, oxine copper, tetramminecopper, copper powder, **cuprous oxide**, copper thiocyanate, **copper carbonate**, cupric acetate), creosote, cyhexatin, DBCP, DDT, diazinon, dichlorvos, dicofol, dieldrin, dimethoate, dinoseb, endosulfan, endrin, ethylene dibromide, ethylene dichloride, ethylene oxide,. . . fluoroacetamide, gamma-HCH, glyphosate, HCH, heptachlor, hexachlorobenzene, malathion, maleic hydrazide, MCPA, mercury compounds, methyl bromide, nitrofen, paraquat, parathion, parathion-methyl, pentachlorophenol, polychlorinated **terpenes**, quintozene, simazine, thallium and thallium compounds, tributyltin compounds (tributyltin oxide, tributyltin methacrylate, tributyltin naphthenate), trifluralin and triphenyltin compounds (fentin acetate).. . .

L33 ANSWER 22 OF 23 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1990-85231 CROPU H F I P L
TI Registration and Use of Pesticides in Poland.
AU Czaplicki E
LO Poznan, Pol.
SO Chem.Ind (London) (1990, No. 12, 397-400)
CODEN: CHINAG
DT Journal
LA English
FA AB; LA; CT
AB This paper outlines the regulatory procedures, patterns of use and probable future needs for pesticides in Poland. The most important diseases, pests and weeds attacking cereals (rye, triticale, winter wheat), potatoes, oilseed rape, and sugarbeet are tabulated, together with the names of the active ingredients registered for use in Poland and the area treated and application technique. Pesticides currently banned in Poland include: aldrin, arsenic derivatives, chlordane, chlorinated mixed **terpenes**, cyhexatin, DDT, dieldrin, dinoseb, etaconazole, ethylene oxide, HCH, ioxynil, isocarbamid, kelevan, mercury derivatives, nitrofen. Captafol, formaldehyde, lindane (gamma-HCH), maneb and zineb are severely restricted.

AB. . . Poland and the area treated and application technique. Pesticides currently banned in Poland include: aldrin, arsenic derivatives, chlordane, chlorinated mixed **terpenes**, cyhexatin, DDT, dieldrin, dinoseb, etaconazole, ethylene oxide, HCH, ioxynil, isocarbamid, kelevan, mercury derivatives, nitrofen. Captafol, formaldehyde, lindane (gamma-HCH), maneb and. . .

ABEX. . . fuberidazole, imazalil, mancozeb, thiabendazole, triadimenol, thiram, benomyl, prochloraz, sulfur, thiophanate-methyl, anilazine, chlorothalonil, cyproconazole, fenpropimorph, flusilazole, propiconazole, pyrazophos, tridemorph, triflorine, benalaxyl, **copper oxychloride**, cymoxanil, oxadixyl, zineb, carbofuran, isofenphos, iprodione, procymidone, vinclozolin, hymexazol, metiram, chlorotoluran, clopyralid, 2,4-D, dicamba, dichlorprop, flurecol, isoproturon, isoxaben,

MCPA, mecoprop,. . .

L33 ANSWER 23 OF 23 CROPU COPYRIGHT 2002 THOMSON DERWENT
AN 1985-81095 CROPU F
TI Toxicity of Some Terpenoids Against Fungi Infesting Fruits and Seeds of Capsicum annuum L. During Storage.
AU Tripathi N N; Asthana A; Dixit S N
LO Gorakhpur, India
SO Phytopathol.Z. (110, No. 4, 328-35, 1984) 3 Tab. 29 Ref.
CODEN: PHYZA3
AV Natural Pesticide Laboratory, Botany Department, Gorakhpur University, Gorakhpur-273001, India.
DT Journal
LA English
FA AB; LA; CT
AB The mycoflora of stored pepper fruits and seeds and their control in vitro by natural **terpenoids** were investigated. Citral, citronellal, citronellol, eugenol, farnesol and nerol at 0.5% completely inhibited mycelium growth in the 2 most common fungi (Aspergillus flavus and A. niger). Citral, eugenol and nerol were toxic to most fungi found, and were more effective than organomercurial dust (Agrosan GN, PMA + ethylmercuric chloride), carbendazim (Bavistin), **copper oxychloride** (**Blitox-50**), mancozeb (Dithane M-45) and zineb (Dithane Z-78).
AB The mycoflora of stored pepper fruits and seeds and their control in vitro by natural **terpenoids** were investigated. Citral, citronellal, citronellol, eugenol, farnesol and nerol at 0.5% completely inhibited mycelium growth in the 2 most common. . . toxic to most fungi found, and were more effective than organomercurial dust (Agrosan GN, PMA + ethylmercuric chloride), carbendazim (Bavistin), **copper oxychloride** (**Blitox-50**), mancozeb (Dithane M-45) and zineb (Dithane Z-78).
ABEX. . . Syncephalastrum racemosum. A. flavus and A. niger mycelial discs were inoculated onto agar plates containing the test compounds. All 6 **terpenoids** completely inhibited mycelial growth at 0.5%. Citral, eugenol and nerol were most effective, their MICs being 0.03-0.06%, versus 0.3-5.0% for organomercurial dust, carbendazim, **copper oxychloride**, mancozeb and zineb. Citral and eugenol were fungicidal to A. flavus; citral was also fungicidal to A. niger. Citral, eugenol. . .

```
=> d que l22
L15             5 SEA FILE=REGISTRY (CUPRIC HYDROXIDE OR CUPROUS HYDROXIDE OR
                  CUPRIC OXYCHLORIDE OR CUPRIC OXICHLORIDE OR CUPROUS OXYCHLORIDE
                   OR CUPROUS OXICHLORIDE OR CUPROUS OXYCHLORIDE OR CUPRIC
                  CARBONATE OR CUPROUS CARBONATE OR CUPROUS OXIDE)/CN
L16             8 SEA FILE=REGISTRY (COPPER HYDROXIDE OR COPPER OXICHLORIDE OR
                  COPPER OXYCHLORIDE OR COPPER CARBONATE OR COPPER OXIDE)/CN
L17            10 SEA FILE=REGISTRY L15 OR L16
L22             5 SEA FILE=CAPLUS L17 (L) (ESSENTIAL (2A) OIL#)


=> s l17 (l) terpen?
         34539 L17
         38187 TERPEN?
L23          4 L17 (L) TERPEN?

=> s l23 not l22
L24          4 L23 NOT L22
```

Search in Caplus

L17 and Pineoil ⇒ ∅ hits

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     FILE 'REGISTRY' ENTERED AT 23:35:03 ON 20 OCT 2002
L14             0 S ((CUPRIC OR CUPROUS) (W) (HYDROXIDE OR OXYCHLORIDE OR OXICHLO
L15             5 S (CUPRIC HYDROXIDE OR CUPROUS HYDROXIDE OR CUPRIC OXYCHLORIDE
L16             8 S (COPPER HYDROXIDE OR COPPER OXICHLORIDE OR COPPER OXYCHLORIDE
L17            10 S L15 OR L16
L18             1 S PINE OIL/CN
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     FILE 'CAPLUS' ENTERED AT 23:47:01 ON 20 OCT 2002
L20           0 S L17 (L) L18
L21           0 S L17 (L) (PINE (2A) OIL#)
L22           5 S L17 (L) (ESSENTIAL (2A) OIL#)
L23           4 S L17 (L) TERPEN?
L24           4 S L23 NOT L22

     FILE 'WPIDS, CABA, CROPB, CROPU' ENTERED AT 23:53:57 ON 20 OCT 2002

     FILE 'REGISTRY' ENTERED AT 23:54:28 ON 20 OCT 2002
                SET SMARTSELECT ON
L25         SEL L17 1- CHEM :     199 TERMS
                SET SMARTSELECT OFF

     FILE 'WPIDS, CABA, CROPB, CROPU' ENTERED AT 23:54:37 ON 20 OCT 2002
L26       16120 S L25/BI
L27           8 S L26 (L) (PINE (3A) OIL#)
L28           7 DUP REM L27 (1 DUPLICATE REMOVED)
L29          27 S L26 (L) ESSENTIAL OIL#
L30          26 DUP REM L29 (1 DUPLICATE REMOVED)
L31          27 S L26 (L) TERPEN?
L32          27 DUP REM L31 (0 DUPLICATES REMOVED)
L33          23 S L32 NOT (L27 OR L29)
```

L22 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 2001:833003 CAPLUS
DN 135:354167
TI Antimicrobial compositions for disinfecting surfaces formulated with essential oils
IN Death, S. Samuel; Death, Joy
PA Scentsible Life Products, Can.
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001084936	A1	20011115	WO 2000-CA647	20000531
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6346281	B1	20020212	US 2000-564282	20000505
US 2002068101	A1	20020606	US 2001-986892	20011113
PRAI US 2000-564282	A	20000505		

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT **1184-64-1**, Cupric carbonate 7758-98-7, Copper sulfate, uses
RL: MOA (Modifier or additive use); USES (Uses)
(ionizing agent in antimicrobial compns. for disinfecting surfaces formulated with **essential oils**)

L22 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1998:402514 CAPLUS
DN 129:58036
TI Deodorants and their manufacture
IN Wakita, Hidenobu; Kimura, Kunio; Ono, Shiro; Honda, Kimiyasu; Fujii, Yasuhiro; Tachibana, Hiroko
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10165490	A2	19980623	JP 1996-327123	19961206

IT 100-52-7, Benzaldehyde, uses 104-55-2, Cinnamaldehyde **1344-70-3**, Copper oxide 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-16-6, Rhodium, uses 11129-60-5, Manganese oxide
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(manuf. of deodorant contg. Cu oxide, Mn oxide, and/or Pt-group metal, zeolites or C, and benzaldehyde- or cinnamaldehyde-contg. **essential oil**)

L22 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1984:66735 CAPLUS
DN 100:66735
TI Cedrus oil - a promising storage fungitoxicant
AU Dikshit, Anupam; Dubey, N. K.; Tripathi, N. N.; Dixit, S. N.

CS Dep. Bot., Univ. Gorakhpur, Gorakhpur, 273001, India
SO J. Stored Prod. Res. (1983), 19(4), 159-62
CODEN: JSTPAR; ISSN: 0022-474X
DT Journal
LA English
AB Seeds of 2 spices, Coriandrum sativum and Foeniculum vulgare, were dressed sep. with **essential oil** of Cedrus deodara as well as with 5 synthetic fungicides, viz., phenylmercury acetate [62-38-4], 2-methoxyethyl mercury chloride [123-88-6], copper oxychloride [**1332-40-7**], mancozeb [8018-01-7], and wettable S. Treated seeds were stored in polythene bags for 12 mo. On mycofloral anal., the oil had checked the appearance of 10 fungi (Absidia sp., Alternaria alternata, Aspergillus flavus, A. fumigatus, A. niger, A. ruber, A. versicolor, Cladosporium cladosporioides, Curvularia lunata, and Paecilomyces variotii) on the seeds of Coriandrum sativum, and of 7 fungi (Absidia sp., A. flavus, A. fumigatus, A. niger, A. ruber, A. versicolor, and Rhizopus spp.) on the seeds of Foeniculum vulgare. The oil proved to be more effective than the synthetic fungicides. Further, the oil did not show any adverse effect on seed germination and seedling growth in either species.

L22 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1980:462420 CAPLUS
DN 93:62420
TI Fungitoxic activity of some essential oils
AU Singh, A. K.; Dikshit, Anupam; Sharma, M. L.; Dixit, S. N.
CS Dep. Bot., Gorakhpur Univ., Gorakhpur, India
SO Econ. Bot. (1980), 34(2), 186-90
CODEN: ECBOA5; ISSN: 0013-0001
DT Journal
LA English
IT 82-68-8 **1332-40-7** 10605-21-7 12122-67-7 17109-49-8
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(fungicidal activity of, **essential oils** in relation to)

L22 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2002 ACS
AN 1974:531448 CAPLUS
DN 81:131448
TI Rust [Puccinia menthae] control on peppermint
AU Grzybowska, Teresa
CS Inst. Przem. Zielarskiego, Poznan, Pol.
SO Herba Pol. (1974), 20(1), 11-19
CODEN: HPBIA9
DT Journal
LA Polish
AB Of 6 fungicides tested in field expts. only zineb (I) [12122-67-7] (0.3%) and Sadoplon 75 (II) [137-26-8] controlled the title rust when applied before the crop's 1st harvest; none of the tested fungicides was effective at a high rust incidence before the 2nd harvest. However, peppermint fresh and dry matter were highest when the plants were treated with II and with Siarkol (III) [12684-31-0] (0.5-0.7%), and the yield of peppermint **essential oil** was highest when Miedzian 50 (cupric oxychloride) [**1332-40-7**] (0.1%) and III were applied.

=>

=> d 1-4 bib ab kwic

L24 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2001:122605 CAPLUS
DN 134:182497
TI Ozone removal in the sampling of parts per billion levels of terpenoid compounds: An evaluation of different scrubber materials
AU Fick, Jerker; Pommer, Linda; Andersson, Barbro; Nilsson, Calle
CS Department of Chemistry Environmental Chemistry, Ume University, Ume, SE-901 87, Swed.
SO Environmental Science and Technology (2001), 35(7), 1458-1462
CODEN: ESTHAG; ISSN: 0013-936X
PB American Chemical Society
DT Journal
LA English
AB Some reactive volatile org. compds. (VOCs) are prone to degrdn. during sampling in an O3-rich environment. A wide variety of different chems. were used to remove the O3 prior to sampling, but the possibility of interference by such chems. with the sampled VOCs was not thoroughly examd. In the present investigation, the retention/degrdn. of 4 terpenes (.alpha.-pinene, .beta.-pinene, 3-carene, and limonene) and isoprene together with some of their oxidn. products (.alpha.-pinene oxide, nopinone, 4-acetyl-1-methylcyclohexene (AMCH), methylglyoxal, and methacrolein) was studied, using various O3-removing chems. in an attempt to evaluate their potential as O3 scrubbers in the sampling of ambient air. The chems. included in this first screening and their O3-removing capacity are as follows: KI, MnO2, and Na2SO3 removed O3 for more than 24 h when exposed to 73-78 ppb (150-160 .mu.g/m3) at a sampling flow rate of 500 mL/min. Silanized poly(1,4-phenylene sulfide) (PFS) removed O3 for 5 h, unsilanized PFS removed O3 for 1 h and 50 min, and Na2S2O3 removed O3 for 20 min. The recovery of the selected compds. with the different scrubbers was >95% for all compds. for KI; >95% for the terpenes oxidn. products; >90% for the terpenes and isoprene for PFS; >90% for the terpenes and isoprene for MnO2 on copper nets, Na2SO3, and Na2S2O3; and <90% for the terpenes and isoprene for carulite (a com. mixt. between MnO2, CuO, and Al2O3), CuO, and indigo carmine.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT 860-22-0, Indigo carmine 1313-13-9, Manganese dioxide, analysis **1317-38-0**, Copper monoxide, analysis 7681-11-0, Potassium iodide, analysis 7757-83-7, Sodium sulfite 7772-98-7, Sodium thiosulfate 25212-74-2, Poly(1,4-phenylene sulfide) 25212-74-2D, Poly(1,4-phenylene sulfide), silanized 185036-38-8, Carulite
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(scrubber; ozone removal in sampling of ppb-levels of **terpenes** by)

L24 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2000:194289 CAPLUS
DN 132:198149
TI Detection of odorous compounds using tin oxide gas sensors. Sensing properties to terpenic and aromatic alcohols
AU Tamaki, Jun; Yagi, Yasuyuki; Yamamoto, Yoshifumi; Matsuoka, Masao
CS Department of Chemistry, Faculty of Science and Engineering, Ritsumeikan University, Shiga, 525-8577, Japan
SO Chemical Sensors (1999), 15(Suppl. A, Proceedings of the 28th Chemical Sensor Symposium, 1999), 40-42
CODEN: KAGSEU
PB Denki Kagakkai Kagaku Sensa Kenkyukai
DT Journal
LA Japanese
AB Various SnO2 based sensors, pure and 18 kinds of SnO2 sensors modified with metal oxide, have been subjected to the detection of 6 terpenic alcs.

(linalool, menthol, .alpha.-terpineol, citronellol, nerol, and geraniol) and 3 arom. alcs. (benzyl alc., phenethyl alc., and 3-phenyl-1-propanol) for the construction of odor sensing system. Among 18 modified sensors, the sensors that effectively enhanced the gas sensitivity were classified into two groups. One was the group of the Nd2O3-, SrO-, and MoO3-SnO2 sensors which showed high sensitivity to citronellol, geraniol, and arom. alcs., implying the use as a selective sensor to these gases. Another was the group of non-selective sensors. The In2O3-, BaO-, and ZnO-SnO2 sensors belonged this group and exhibited high sensitivity to all gases. The enhancement of gas sensitivity due to the modification was interpreted with respect to the increase in catalytic activity as well as the change of reaction route.

IT 1304-28-5, Baria, uses 1304-76-3, Bismuth oxide bi2o3, uses 1305-78-8, Calcia, uses 1308-06-1, Cobalt oxide co3o4 1309-48-4, Magnesia, uses 1312-43-2, Indium oxide in2o3 1312-81-8, Lanthana 1313-13-9, Manganese dioxide, uses 1313-27-5, Molybdenum trioxide, uses 1313-97-9, Neodymia 1313-99-1, Nickel oxide nio, uses 1314-11-0, Strontia, uses 1314-13-2, Zinc oxide zno, uses 1314-35-8, Tungsten trioxide, uses **1317-38-0**, Copper oxide cuo, uses 12060-58-1, Samaria 18088-11-4, Rubidium oxide rb2o 20281-00-9, Cesium oxide cs2o
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(detection of odorous compds. using tin oxide gas sensors and sensing properties to **terpenic** and arom. alcs.)

L24 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 1981:569543 CAPLUS
DN 95:169543
TI Esters of cyclic terpene alcohols
PA Taiyo Perfumery Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 56049339	A2	19810502	JP 1979-123960	19790928
JP 62034748	B4	19870728		

AB Cyclic terpene alcs. were esterified with isomerization by lower satd. fatty acids in the presence of Cu compds., Pt chloride, or strong acids. Thus, 76 g pinocarveol (I) in 300 g HOAc -127.5 g Ac2O contg. 3.8 g Cu2O was heated at 120-5.degree. for 5 h to give 68 g myrtenyl acetate (II).

IT 104-15-4, uses and miscellaneous 142-71-2 **1317-39-1**, uses and miscellaneous 7664-93-9, uses and miscellaneous 16941-12-1
RL: CAT (Catalyst use); USES (Uses)
(catalyst, for isomerization-esterification of cyclic **terpene** alcs.)

L24 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 1968:489359 CAPLUS
DN 69:89359
TI Oxidizable metal powders coated with terpene ether
IN Bordenca, Carl
PA SCM Corp.
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3401051	A	19680910	US 1965-470616	19650708

AB Free-flowing, oxidizable, powd. elemental metal between Mg and Au in the electromotive series and their lower oxides (100-325 mesh) are stabilized against oxidn. and agglomeration by treatment with 0.025-0.1% and 0.1-0.3%, resp., additive terpene ethers having the formula TO(RO)nH, where T = unsatd. terpene hydrocarbon radical, R = lower alkylene group, and n = 1-5. Thus, a mixt. of terpene ether isomers is prepd. by heating 500 lb. .alpha.-pinene and 400 lb. ethylene glycol at 50-5.degree. for 4 hrs. in the presence of BF3 etherate catalyst and washing the top layer with Na2CO3. A premix is prepd. by mixing 10 lb. Cu powder (100-325 mesh) and 0.05 lb. terpene ether for 2 hrs. The premix and 90 lb. of Cu powder is blended for 5 min. The modulus of rupture of the treated particles is 1130 lb./sq. in. and after 12 days of storage 1160 lb./sq. in. as compared to 1460 and 960 lb./sq. in., resp., for untreated Cu power.

IT **1317-39-1**, reactions 7439-89-6, reactions 7440-50-8, reactions
RL: RCT (Reactant)
(powd., agglomeration and oxidn. of, prevention by **terpene** ethers)